



National Center for Science and
Engineering Statistics

Federal Funds for Research and Development: Fiscal Years 2019–20

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General Notes

These tables present the results of Volume 69 (FYs 2019–20) of the Survey of Federal Funds for Research and Development. This annual census, completed by the federal agencies that conduct R&D programs, is the primary source of information about federal funding for R&D in the United States. Actual data are collected for the fiscal year just completed; estimates are obtained for the current fiscal year.

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TABLE 1

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(Dollars in thousands)

Fiscal year	Total	Total R&D	Total research	Basic research	Applied research	Development	R&D plant
1951	1,851,571.0	1,521,527.0	NA	NA	NA	NA	330,044.0
1952	2,216,848.0	1,909,665.0	NA	120,945.0	NA	NA	307,183.0
1953	2,167,456.0	1,919,543.0	NA	115,997.0	NA	NA	247,913.0
1954	1,918,046.0	1,761,840.0	NA	116,033.0	NA	NA	156,206.0
1955	2,251,894.0	2,044,593.0	NA	130,068.0	NA	NA	207,301.0
1956	3,266,903.0	2,988,203.0	851,947.0	206,441.0	645,506.0	2,136,256.0	278,700.0
1957	4,389,237.0	3,932,001.0	924,547.0	262,348.0	662,199.0	3,007,454.0	457,236.0
1958	4,906,015.0	4,569,722.0	1,078,807.0	334,543.0	744,264.0	3,490,915.0	336,293.0
1959	7,122,610.0	6,693,510.0	1,340,253.0	465,981.0	874,272.0	5,353,257.0	429,100.0
1960	8,080,015.0	7,551,746.0	1,872,509.0	590,374.0	1,282,135.0	5,679,237.0	528,269.0
1961	9,607,023.0	9,058,623.0	2,477,944.0	814,513.0	1,663,431.0	6,580,679.0	548,400.0
1962	11,069,059.0	10,289,947.0	3,004,795.0	986,314.0	2,018,481.0	7,285,152.0	779,112.0
1963	13,662,879.0	12,494,611.0	3,507,903.0	1,151,753.0	2,356,150.0	8,986,708.0	1,168,268.0
1964	15,323,870.0	14,225,354.0	3,874,452.0	1,303,000.0	2,571,452.0	10,350,902.0	1,098,516.0
1965	15,745,852.0	14,614,249.0	4,247,230.0	1,435,469.0	2,811,761.0	10,367,019.0	1,131,603.0
1966	16,178,640.0	15,320,334.0	4,660,247.0	1,579,181.0	3,081,066.0	10,660,087.0	858,306.0
1967	17,149,186.0	16,529,099.0	4,631,390.0	1,845,847.0	2,785,543.0	11,897,709.0	620,087.0
1968	16,525,038.0	15,921,208.0	4,781,062.0	1,840,562.0	2,940,500.0	11,140,146.0	603,830.0
1969	16,309,900.0	15,640,888.0	4,644,890.0	1,944,773.0	2,700,117.0	10,995,998.0	669,012.0
1970	15,863,385.0	15,338,937.0	4,900,798.0	1,925,908.0	2,974,890.0	10,438,139.0	524,448.0
1971	16,153,756.0	15,542,512.0	5,123,171.0	1,980,141.0	3,143,030.0	10,419,341.0	611,244.0
1972	17,097,951.0	16,495,895.0	5,547,696.0	2,186,937.0	3,360,759.0	10,948,199.0	602,056.0
1973	17,574,486.0	16,800,153.0	5,581,429.0	2,232,006.0	3,349,423.0	11,218,724.0	774,333.0
1974	18,176,457.0	17,410,128.0	6,175,240.0	2,387,681.0	3,787,559.0	11,234,888.0	766,329.0
1975	19,859,548.0	19,038,818.0	6,729,708.0	2,588,427.0	4,141,281.0	12,309,110.0	820,730.0
1976	21,616,382.0	20,779,658.0	7,619,332.0	2,767,454.0	4,851,878.0	13,160,326.0	836,724.0
1977	24,817,577.0	23,450,377.0	8,514,115.0	3,258,640.0	5,255,475.0	14,936,262.0	1,367,200.0
1978	27,140,849.0	25,845,137.0	9,606,758.0	3,698,604.0	5,908,154.0	16,238,379.0	1,295,712.0
1979	29,620,597.0	28,145,142.0	10,535,005.0	4,192,665.0	6,342,340.0	17,610,137.0	1,475,455.0
1980	31,386,095.0	29,830,432.0	11,597,378.0	4,674,156.0	6,923,222.0	18,233,054.0	1,555,663.0
1981	34,589,634.0	33,103,924.0	12,212,780.0	5,041,295.0	7,171,485.0	20,891,144.0	1,485,710.0
1982	37,822,363.0	36,432,589.0	13,022,185.0	5,481,605.0	7,540,580.0	23,410,404.0	1,389,774.0
1983	40,009,032.0	38,711,537.0	14,253,525.0	6,260,131.0	7,993,394.0	24,458,012.0	1,297,495.0
1984	44,012,149.0	42,224,865.0	14,978,773.0	7,067,359.0	7,911,414.0	27,246,092.0	1,787,284.0
1985	50,180,369.0	48,359,565.0	16,133,421.0	7,818,682.0	8,314,739.0	32,226,144.0	1,820,804.0
1986	52,951,181.0	51,412,364.0	16,502,199.0	8,153,076.0	8,349,123.0	34,910,165.0	1,538,817.0
1987	57,099,656.0	55,253,693.0	17,940,521.0	8,942,425.0	8,998,096.0	37,313,172.0	1,845,963.0
1988	58,826,512.0	56,769,425.0	18,650,145.0	9,473,618.0	9,176,527.0	38,119,280.0	2,057,087.0
1989	63,571,605.0	61,406,484.0	20,765,531.0	10,602,011.0	10,163,520.0	40,640,953.0	2,165,121.0
1990	65,831,189.0	63,559,471.0	21,622,364.0	11,285,593.0	10,336,771.0	41,937,107.0	2,271,718.0
1991	64,147,951.0	61,295,152.0	23,968,377.0	12,170,794.0	11,797,583.0	37,326,775.0	2,852,799.0
1992	68,577,184.0	65,592,590.0	24,490,598.0	12,489,864.0	12,000,734.0	41,101,992.0	2,984,594.0
1993	70,414,697.0	67,314,025.0	26,890,497.0	13,399,121.0	13,491,376.0	40,423,528.0	3,100,672.0
1994	69,450,776.0	67,235,390.0	27,411,209.0	13,523,476.0	13,887,733.0	39,824,181.0	2,215,386.0
1995	70,442,935.0	68,186,798.0	28,434,396.0	13,877,031.0	14,557,365.0	39,752,402.0	2,256,137.0
1996	69,399,164.0	67,653,047.0	28,259,764.0	14,464,035.0	13,795,729.0	39,393,283.0	1,746,117.0
1997	71,753,430.0	69,826,779.0	29,365,289.0	14,941,892.0	14,423,397.0	40,461,490.0	1,926,651.0
1998	73,913,988.0	72,100,724.0	30,922,269.0	15,613,012.0	15,309,257.0	41,178,455.0	1,813,264.0
1999	77,386,368.0	75,340,622.0	33,527,514.0	17,443,653.0	16,083,861.0	41,813,108.0	2,045,746.0
2000	80,403,169.0	75,910,322.0	38,470,630.0	19,569,849.0	18,900,781.0	37,439,692.0	4,492,847.0

TABLE 1

Federal obligations for research and development, by type of R&D, and for R&D plant: FYs 1951–2020

(Dollars in thousands)

Fiscal year	Total	Total R&D	Total research	Basic research	Applied research	Development	R&D plant
2001	88,562,350.0	84,492,522.0	44,713,736.0	21,958,136.0	22,755,600.0	39,778,786.0	4,069,828.0
2002	98,013,347.0	93,708,604.0	48,006,711.0	23,668,345.0	24,338,366.0	45,701,893.0	4,304,743.0
2003	107,794,188.0	103,527,670.0	51,071,843.0	24,751,441.0	26,320,402.0	52,455,827.0	4,266,518.0
2004	116,068,604.0	112,074,452.0	53,357,811.0	26,120,663.0	27,237,148.0	58,716,641.0	3,994,152.0
2005	122,619,584.0	118,848,457.0	53,738,245.0	27,140,335.0	26,597,910.0	65,110,212.0	3,771,127.0
2006	123,854,731.0	121,729,949.0	53,535,650.0	26,584,592.0	26,951,058.0	68,194,299.0	2,124,782.0
2007	129,431,246.0	127,262,861.0	54,093,565.0	26,865,786.0	27,227,779.0	73,169,296.0	2,168,385.0
2008	129,049,945.3	127,106,084.3	53,893,678.0	27,153,966.0	26,739,712.0	73,212,406.3	1,943,861.0
2009	144,758,102.7	141,090,090.7	63,691,871.9	32,879,356.9	30,812,515.0	77,398,218.9	3,668,012.0
2010	146,967,799.9	140,354,521.1	63,727,973.3	31,795,342.2	31,932,631.1	76,626,547.9	6,613,278.8
2011	139,703,280.6	135,532,585.2	58,064,824.1	29,313,593.3	28,751,230.8	77,467,761.2	4,170,695.4
2012	140,670,243.1	138,524,567.5	61,986,309.8	30,958,892.9	31,027,416.9	76,538,257.7	2,145,675.6
2013	127,625,543.8	125,720,395.1	59,532,626.3	29,779,403.8	29,753,222.4	66,187,768.9	1,905,148.7
2014	132,778,961.6	130,561,319.9	63,191,428.1	31,587,903.1	31,603,525.0	67,369,891.9	2,217,641.6
2015	131,578,340.7	128,753,285.5	63,825,444.2	31,527,071.3	32,298,372.9	64,927,841.2	2,825,055.2
2016	118,273,783.6	115,832,794.4	67,104,649.2	32,292,658.7	34,811,990.4	48,728,145.3	2,440,989.2
2017	121,626,565.0	118,974,798.7	69,871,308.0	33,271,489.9	36,599,818.1	49,103,490.7	2,651,766.3
2018	133,277,539.6	129,424,802.5	74,587,572.8	36,195,127.6	38,392,445.2	54,837,229.7	3,852,737.1
2019	146,800,654.4	142,424,206.6	81,117,784.1	40,017,257.6	41,100,526.5	61,306,422.5	4,376,447.8
2020 (preliminary)	155,643,718.4	150,884,687.7	85,262,440.2	41,755,263.7	43,507,176.5	65,622,247.5	4,759,030.8

NA = not available; data were not collected at this level of detail.

Note(s):

Because of rounding, detail may not add to total. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. Beginning with FY 2016, the totals reported for development obligations represent a refinement to this category by more narrowly defining it to be "experimental development." Most notably, totals for development do not include the Department of Defense (DOD) Budget Activity 7 (Operational Systems Development) obligations. Those funds, previously included in DOD's development obligation totals, support the development efforts to upgrade systems that have been fielded or have received approval for full-rate production and anticipate production funding in the current or subsequent fiscal year. Therefore, the data are not directly comparable with totals reported in previous years. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 2

Summary of federal obligations and outlays for research, experimental development, and R&D plant, by type of R&D, performer, and field of science and engineering: FYs 2018–20

(Dollars in millions)

Type of R&D, performer, and field	2018	2019	Preliminary	
			2020	% change 2019–20
Outlays for R&D and R&D plant	120,916.2	129,870.4	142,166.9	9.5
R&D	117,072.2	124,854.5	136,453.3	9.3
R&D plant	3,844.0	5,015.9	5,713.6	13.9
Obligations for R&D and R&D plant	133,277.5	146,800.7	155,643.7	6.0
R&D	129,424.8	142,424.2	150,884.7	5.9
Performer				
Intramural ^a	35,953.4	39,312.8	42,404.9	7.9
Industry	39,753.7	44,446.0	46,497.8	4.6
Industry-administered FFRDCs	4,062.4	6,077.6	6,483.8	6.7
Universities and colleges	31,534.1	34,000.5	36,091.9	6.2
University-administered FFRDCs	4,895.8	5,351.9	5,240.7	-2.1
Other nonprofit institutions	8,450.8	8,450.2	8,951.4	5.9
Nonprofit-administered FFRDCs	3,497.3	3,261.5	3,629.7	11.3
State and local governments	561.9	586.5	564.2	-3.8
Foreign	715.4	937.2	1,020.4	8.9
Research	74,587.6	81,117.8	85,262.4	5.1
Performer				
Intramural ^a	17,817.5	18,298.2	19,465.2	6.4
Industry	8,768.1	10,738.9	10,832.7	0.9
Industry-administered FFRDCs	3,453.6	3,666.7	4,214.5	14.9
Universities and colleges	30,088.6	32,381.0	34,389.6	6.2
University-administered FFRDCs	3,704.6	4,882.4	4,730.0	-3.1
Other nonprofit institutions	7,614.5	7,891.5	8,177.8	3.6
Nonprofit-administered FFRDCs	2,299.8	2,270.9	2,436.2	7.3
State and local governments	430.2	500.4	503.7	0.7
Foreign	410.7	487.7	512.8	5.1
Field of science and engineering				
Computer sciences and mathematics	4,206.9	4,330.0	4,740.3	9.5
Engineering	13,758.6	15,279.3	16,417.4	7.4
Environmental sciences	4,567.6	5,074.7	4,778.3	-5.8
Life sciences	36,994.4	38,303.7	40,665.4	6.2
Physical sciences	7,881.4	9,816.1	9,607.6	-2.1
Psychology	2,326.9	2,753.6	2,932.9	6.5
Social sciences	1,039.4	1,155.7	1,018.3	-11.9
Other sciences nec	3,812.4	4,404.8	5,102.2	15.8
Basic research	36,195.1	40,017.3	41,755.3	4.3
Performer				
Intramural ^a	6,688.7	7,240.4	7,935.4	9.6
Industry	2,786.8	3,636.6	3,542.3	-2.6
Industry-administered FFRDCs	584.4	555.7	553.4	-0.4
Universities and colleges	17,503.5	18,626.5	19,635.3	5.4
University-administered FFRDCs	3,283.4	4,419.7	4,261.6	-3.6
Other nonprofit institutions	3,657.8	3,724.6	3,889.0	4.4
Nonprofit-administered FFRDCs	1,401.0	1,478.1	1,576.5	6.7
State and local governments	87.0	86.0	117.9	37.0
Foreign	202.5	249.5	243.9	-2.2
Field of science and engineering				
Computer sciences and mathematics	2,084.6	2,305.9	2,474.2	7.3

TABLE 2

Summary of federal obligations and outlays for research, experimental development, and R&D plant, by type of R&D, performer, and field of science and engineering: FYs 2018–20

(Dollars in millions)

Type of R&D, performer, and field	2018	2019	Preliminary	
			2020	% change 2019–20
Engineering	3,585.7	3,618.0	3,811.5	5.4
Environmental sciences	2,996.4	3,251.8	2,922.3	-10.1
Life sciences	18,176.1	18,880.6	20,206.5	7.0
Physical sciences	5,930.8	7,907.0	7,716.1	-2.4
Psychology	1,147.3	1,366.1	1,471.7	7.7
Social sciences	374.1	451.2	428.9	-5.0
Other sciences nec	1,900.0	2,236.8	2,724.1	21.8
Applied research	38,392.4	41,100.5	43,507.2	5.9
Performer				
Intramural ^a	11,128.8	11,057.9	11,529.8	4.3
Industry	5,981.3	7,102.3	7,290.4	2.6
Industry-administered FFRDCs	2,869.2	3,110.9	3,661.1	17.7
Universities and colleges	12,585.1	13,754.5	14,754.3	7.3
University-administered FFRDCs	421.2	462.7	468.4	1.2
Other nonprofit institutions	3,956.7	4,166.9	4,288.8	2.9
Nonprofit-administered FFRDCs	898.8	792.8	859.7	8.4
State and local governments	343.2	414.4	385.8	-6.9
Foreign	208.1	238.2	268.8	12.9
Field of science and engineering				
Computer sciences and mathematics	2,122.3	2,024.0	2,266.1	12.0
Engineering	10,172.8	11,661.4	12,605.9	8.1
Environmental sciences	1,571.1	1,822.9	1,856.0	1.8
Life sciences	18,818.3	19,423.1	20,458.9	5.3
Physical sciences	1,950.7	1,909.2	1,891.6	-0.9
Psychology	1,179.6	1,387.5	1,461.3	5.3
Social sciences	665.3	704.5	589.4	-16.3
Other sciences nec	1,912.4	2,168.0	2,378.1	9.7
Experimental development	54,837.2	61,306.4	65,622.2	7.0
Performer				
Intramural ^a	18,135.9	21,014.5	22,939.6	9.2
Industry	30,985.5	33,707.1	35,665.1	5.8
Industry-administered FFRDCs	608.8	2,410.9	2,269.3	-5.9
Universities and colleges	1,445.5	1,619.5	1,702.4	5.1
University-administered FFRDCs	1,191.2	469.5	510.7	8.8
Other nonprofit institutions	836.3	558.7	773.5	38.4
Nonprofit-administered FFRDCs	1,197.6	990.6	1,193.5	20.5
State and local governments	131.7	86.1	60.5	-29.7
Foreign	304.7	449.5	507.6	12.9
R&D plant	3,852.7	4,376.4	4,759.0	8.7
Performer				
Intramural ^a	1,252.1	1,092.7	1,652.0	51.2
Industry	310.9	354.0	207.5	-41.4
Industry-administered FFRDCs	214.2	428.3	350.3	-18.2
Universities and colleges	410.4	514.0	427.1	-16.9
University-administered FFRDCs	761.5	850.0	799.3	-6.0
Other nonprofit institutions	180.2	169.8	241.9	42.4
Nonprofit-administered FFRDCs	709.4	956.2	1,076.3	12.6
State and local governments	0.0	1.2	1.0	-15.0

TABLE 2

Summary of federal obligations and outlays for research, experimental development, and R&D plant, by type of R&D, performer, and field of science and engineering: FYs 2018–20

(Dollars in millions)

Type of R&D, performer, and field	2018	2019	Preliminary	
			2020	% change 2019–20
Foreign	14.1	10.3	3.5	-65.8

FFRDC = federally funded research and development center; nec = not elsewhere classified.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.

Note(s):

Because of rounding, detail may not add to total. Percentages are computed using actual dollars reported. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 3

Federal obligations and outlays for research, experimental development, and R&D plant, by agency: FYs 2019–20

(Dollars in millions)

Agency	Obligations		Outlays	
	2019	2020 (preliminary)	2019	2020 (preliminary)
All agencies	146,800.7	155,643.7	129,870.4	142,166.9
Departments				
Department of Agriculture	2,666.1	3,334.2	2,546.8	3,313.4
Agricultural Marketing Service	7.7	7.0	7.7	7.0
Agricultural Research Service	1,311.7	1,842.0	1,188.9	1,479.0
Animal and Plant Health Inspection Service	39.5	39.5	39.1	39.1
Economic Research Service	85.6	85.3	82.2	87.0
Foreign Agricultural Service	0.0	0.5	0.0	0.5
Forest Service	336.8	307.0	332.6	414.0
National Agricultural Statistics Service	9.5	9.0	9.5	9.0
National Institute of Food and Agriculture	871.4	1,040.0	884.0	1,275.0
Rural Business-Cooperative Service	3.9	3.9	2.8	2.8
Department of Commerce	1,999.0	2,240.3	1,907.6	1,897.8
National Institute of Standards and Technology	831.3	1,140.4	836.1	859.8
National Oceanic and Atmospheric Administration	1,064.2	972.0	967.0	909.0
National Telecommunications and Information Administration	7.9	8.2	8.9	9.2
U.S. Census Bureau	95.6	119.8	95.6	119.8
Department of Defense	59,389.2	62,766.9	48,488.5	54,648.4
Defense Advanced Research Projects Agency	3,321.0	3,667.2	3,253.7	3,403.7
Department of the Air Force	15,269.4	15,782.2	12,035.5	15,134.1
Department of the Army	10,274.8	10,754.8	9,293.2	10,203.4
Department of the Navy	15,484.4	16,921.3	11,029.1	12,102.8
Other defense agencies	15,039.6	15,641.5	12,877.0	13,804.4
Department of Education	235.8	242.2	226.4	203.0
Department of Energy	16,621.9	18,539.2	16,893.2	20,007.0
Advanced Research Projects Agency—Energy	405.0	425.0	247.1	352.1
Electricity Delivery and Energy Reliability	137.7	153.9	144.2	146.8
Energy Efficiency and Renewable Energy	2,001.3	2,985.2	3,189.6	3,632.9
Environmental Management	26.1	11.6	29.3	31.4
Fossil Energy	682.0	709.0	682.0	709.0
National Nuclear Security Administration	6,077.9	6,612.1	5,752.5	7,748.0
Defense Programs	3,997.8	4,649.3	3,634.9	5,697.7
Naval Nuclear Propulsion Program	1,788.6	1,648.4	1,788.6	1,648.4
Office of Defense Nuclear Nonproliferation	291.5	314.5	329.0	402.0
Nuclear Energy	606.4	675.6	1,109.5	657.3
Office of Cybersecurity, Energy Security, and Emergency Response	51.9	43.9	36.3	67.4
Office of Science	6,633.6	6,923.0	5,702.7	6,662.1
Department of Health and Human Services	39,434.2	41,826.7	35,426.7	37,827.0
Administration for Children and Families	2.3	1.6	2.4	1.6
Administration for Community Living	83.1	90.2	83.1	90.2
Agency for Healthcare Research and Quality	338.0	308.1	338.0	338.0
Agency for Toxic Substances and Disease Registry	7.0	7.0	7.0	7.0
Biomedical Advanced Research and Development Authority	736.2	747.0	280.8	16.9
Centers for Disease Control and Prevention	419.4	405.2	187.2	181.6
Centers for Medicare and Medicaid Services	133.5	136.0	5.8	5.8
Food and Drug Administration	519.1	530.0	469.7	480.5
Health Resources and Services Administration	32.6	31.5	26.6	19.4
National Institutes of Health	37,146.0	39,553.0	34,009.0	36,669.0
Office of the Secretary of Health and Human Services	17.0	17.0	17.0	17.0

TABLE 3

Federal obligations and outlays for research, experimental development, and R&D plant, by agency: FYs 2019–20

(Dollars in millions)

Agency	Obligations		Outlays	
	2019	2020 (preliminary)	2019	2020 (preliminary)
Office of the Assistant Secretary for Planning and Evaluation	17.0	17.0	17.0	17.0
Department of Homeland Security	648.5	507.7	1,069.5	983.5
Countering Weapons of Mass Destruction Office	81.4	41.4	81.4	47.7
Cybersecurity and Infrastructure Security Agency	13.1	14.4	13.1	14.4
Science and Technology Directorate	510.5	422.0	929.0	885.0
Transportation Security Administration	20.6	22.9	20.6	22.9
U.S. Coast Guard	20.8	4.9	23.4	1.2
U.S. Secret Service	1.9	2.1	1.9	12.2
Department of Housing and Urban Development	61.0	88.6	63.0	64.0
Department of the Interior	831.5	891.1	804.4	843.7
Bureau of Indian Affairs	5.0	5.0	5.0	5.0
Bureau of Land Management	20.8	20.8	20.8	20.8
Bureau of Ocean Energy Management	85.5	96.9	73.3	69.6
Bureau of Reclamation	24.3	37.5	24.3	37.5
Bureau of Safety and Environmental Enforcement	12.6	22.7	15.0	18.5
National Park Service	10.1	10.2	0.9	0.9
Office of Surface Mining Reclamation and Enforcement	0.3	0.5	1.0	0.8
U.S. Fish and Wildlife Service	32.7	32.7	24.0	25.8
U.S. Geological Survey	640.2	664.8	640.2	664.8
Department of Justice	121.2	107.0	19.6	19.1
Bureau of Prisons	6.6	7.0	6.6	7.0
Federal Bureau of Investigation	1.0	1.0	1.0	1.0
Office of Justice Programs	113.6	99.0	12.0	11.0
Department of Labor	4.4	4.7	2.8	2.8
Employee Benefits Security Administration	2.6	2.9	1.1	1.1
Occupational Safety and Health Administration	1.7	1.8	1.7	1.8
Department of State	62.2	62.3	62.2	62.3
Department of Transportation	1,051.7	1,384.6	706.6	747.1
Federal Aviation Administration	424.3	739.8	247.0	261.0
Federal Highway Administration	451.6	417.7	287.1	261.8
Federal Motor Carrier Safety Administration	7.8	11.1	7.1	9.1
Federal Railroad Administration	41.4	40.0	35.1	55.0
Federal Transit Administration	2.8	20.0	39.7	35.0
National Highway Traffic Safety Administration	76.3	74.2	64.0	57.0
Office of the Secretary of Transportation	19.8	27.0	8.5	22.2
Pipeline and Hazardous Materials Safety Administration	27.8	54.8	18.0	45.9
Department of the Treasury	61.3	61.8	48.8	48.9
Bureau of Engraving and Printing	58.8	61.4	46.4	48.5
U.S. Mint	2.5	0.4	2.5	0.4
Department of Veterans Affairs	1,507.9	1,602.7	685.0	757.0
Other agencies				
Administrative Office of the U.S. Courts	6.4	7.7	6.4	7.7
Agency for International Development	220.6	220.6	220.6	220.6
Appalachian Regional Commission	0.9	0.0	0.6	0.5
Consumer Product Safety Commission	0.9	0.2	0.9	0.2
Environmental Protection Agency	490.0	493.0	490.0	493.0
Federal Communications Commission	2.0	1.8	2.0	1.8
Federal Trade Commission	6.0	7.3	6.0	7.3
Library of Congress	1.9	2.7	1.9	2.7

TABLE 3

Federal obligations and outlays for research, experimental development, and R&D plant, by agency: FYs 2019–20

(Dollars in millions)

Agency	Obligations		Outlays	
	2019	2020 (preliminary)	2019	2020 (preliminary)
National Aeronautics and Space Administration	13,616.4	13,486.8	13,338.2	13,011.4
National Archives and Records Administration	0.5	0.0	0.5	0.0
National Science Foundation	6,648.3	6,710.8	5,741.0	5,944.0
Nuclear Regulatory Commission	74.9	65.3	74.9	65.3
Patient-Centered Outcomes Research Trust Fund	578.4	540.7	578.5	540.7
Smithsonian Institution	269.0	274.0	269.0	274.0
Social Security Administration	146.2	131.8	146.2	131.8
Tennessee Valley Authority	9.7	8.2	9.7	8.2
U.S. Agency for Global Media	6.1	6.2	6.1	6.2
U.S. Postal Service	26.7	26.6	26.7	26.6

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations or outlays in variables represented by this table appear in the table. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 4

Federal obligations and outlays for research and experimental development, by agency: FYs 2019–20

(Dollars in millions)

Agency	Obligations		Outlays	
	2019	2020 (preliminary)	2019	2020 (preliminary)
All agencies	142,424.2	150,884.7	124,854.5	136,453.3
Departments				
Department of Agriculture	2,637.1	2,904.2	2,497.8	3,204.4
Agricultural Marketing Service	7.7	7.0	7.7	7.0
Agricultural Research Service	1,292.4	1,414.0	1,149.6	1,372.0
Animal and Plant Health Inspection Service	39.5	39.5	39.1	39.1
Economic Research Service	85.6	85.3	82.2	87.0
Foreign Agricultural Service	0.0	0.5	0.0	0.5
Forest Service	327.2	305.0	323.0	412.0
National Agricultural Statistics Service	9.5	9.0	9.5	9.0
National Institute of Food and Agriculture	871.4	1,040.0	884.0	1,275.0
Rural Business-Cooperative Service	3.9	3.9	2.8	2.8
Department of Commerce	1,534.7	1,621.8	1,521.9	1,554.6
National Institute of Standards and Technology	712.3	768.4	703.4	708.6
National Oceanic and Atmospheric Administration	718.9	725.4	714.0	717.0
National Telecommunications and Information Administration	7.9	8.2	8.9	9.2
U.S. Census Bureau	95.6	119.8	95.6	119.8
Department of Defense	58,779.5	62,461.3	48,135.3	54,317.2
Defense Advanced Research Projects Agency	3,321.0	3,667.2	3,253.7	3,403.7
Department of the Air Force	15,076.8	15,621.8	11,830.4	14,931.2
Department of the Army	10,274.8	10,754.8	9,293.2	10,203.4
Department of the Navy	15,341.2	16,787.0	10,902.7	11,985.6
Other defense agencies	14,765.8	15,630.6	12,855.2	13,793.3
Department of Education	235.8	242.2	226.4	203.0
Department of Energy	14,376.4	16,136.0	13,656.5	16,157.5
Advanced Research Projects Agency—Energy	405.0	425.0	247.1	352.1
Electricity Delivery and Energy Reliability	137.7	153.9	144.2	146.8
Energy Efficiency and Renewable Energy	1,695.8	2,566.6	1,451.2	1,679.5
Environmental Management	26.1	11.6	29.3	31.4
Fossil Energy	659.0	680.0	659.0	680.0
National Nuclear Security Administration	5,740.6	6,319.6	5,477.1	7,466.5
Defense Programs	3,660.4	4,367.8	3,359.5	5,425.2
Naval Nuclear Propulsion Program	1,788.6	1,648.4	1,788.6	1,648.4
Office of Defense Nuclear Nonproliferation	291.5	303.5	329.0	393.0
Nuclear Energy	606.4	610.6	1,109.5	631.3
Office of Cybersecurity, Energy Security, and Emergency Response	51.9	43.9	36.3	67.4
Office of Science	5,053.9	5,324.9	4,502.9	5,102.5
Department of Health and Human Services	39,191.2	41,561.7	35,270.7	37,604.0
Administration for Children and Families	2.3	1.6	2.4	1.6
Administration for Community Living	83.1	90.2	83.1	90.2
Agency for Healthcare Research and Quality	338.0	308.1	338.0	338.0
Agency for Toxic Substances and Disease Registry	7.0	7.0	7.0	7.0
Biomedical Advanced Research and Development Authority	736.2	747.0	280.8	16.9
Centers for Disease Control and Prevention	419.4	405.2	187.2	181.6
Centers for Medicare and Medicaid Services	133.5	136.0	5.8	5.8
Food and Drug Administration	493.1	495.0	443.7	445.5
Health Resources and Services Administration	32.6	31.5	26.6	19.4
National Institutes of Health	36,929.0	39,323.0	33,879.0	36,481.0
Office of the Secretary of Health and Human Services	17.0	17.0	17.0	17.0

TABLE 4

Federal obligations and outlays for research and experimental development, by agency: FYs 2019–20

(Dollars in millions)

Agency	Obligations		Outlays	
	2019	2020 (preliminary)	2019	2020 (preliminary)
Office of the Assistant Secretary for Planning and Evaluation	17.0	17.0	17.0	17.0
Department of Homeland Security	647.2	507.7	863.2	813.5
Countering Weapons of Mass Destruction Office	81.4	41.4	81.4	47.7
Cybersecurity and Infrastructure Security Agency	13.1	14.4	13.1	14.4
Science and Technology Directorate	510.5	422.0	724.0	715.0
Transportation Security Administration	20.6	22.9	20.6	22.9
U.S. Coast Guard	19.5	4.9	22.1	1.2
U.S. Secret Service	1.9	2.1	1.9	12.2
Department of Housing and Urban Development	61.0	88.6	63.0	64.0
Department of the Interior	826.8	882.7	800.7	837.4
Bureau of Indian Affairs	5.0	5.0	5.0	5.0
Bureau of Land Management	20.8	20.8	20.8	20.8
Bureau of Ocean Energy Management	85.5	96.9	73.3	69.6
Bureau of Reclamation	23.2	36.4	23.2	36.4
Bureau of Safety and Environmental Enforcement	9.1	15.5	12.5	13.3
National Park Service	10.1	10.2	0.9	0.9
Office of Surface Mining Reclamation and Enforcement	0.3	0.5	1.0	0.8
U.S. Fish and Wildlife Service	32.7	32.7	24.0	25.8
U.S. Geological Survey	640.2	664.8	640.2	664.8
Department of Justice	121.2	107.0	19.6	19.1
Bureau of Prisons	6.6	7.0	6.6	7.0
Federal Bureau of Investigation	1.0	1.0	1.0	1.0
Office of Justice Programs	113.6	99.0	12.0	11.0
Department of Labor	4.4	4.7	2.8	2.8
Employee Benefits Security Administration	2.6	2.9	1.1	1.1
Occupational Safety and Health Administration	1.7	1.8	1.7	1.8
Department of State	62.2	62.3	62.2	62.3
Department of Transportation	1,012.5	1,335.2	668.9	710.3
Federal Aviation Administration	387.0	692.1	211.0	226.0
Federal Highway Administration	451.6	417.7	287.1	261.8
Federal Motor Carrier Safety Administration	7.8	11.1	7.1	9.1
Federal Railroad Administration	39.4	38.3	33.4	53.3
Federal Transit Administration	2.8	20.0	39.7	35.0
National Highway Traffic Safety Administration	76.3	74.2	64.0	57.0
Office of the Secretary of Transportation	19.8	27.0	8.5	22.2
Pipeline and Hazardous Materials Safety Administration	27.8	54.8	18.0	45.9
Department of the Treasury	57.1	60.6	44.7	47.7
Bureau of Engraving and Printing	57.0	60.4	44.5	47.5
U.S. Mint	0.2	0.2	0.2	0.2
Department of Veterans Affairs	1,507.9	1,602.7	685.0	757.0
Other agencies				
Administrative Office of the U.S. Courts	6.4	7.7	6.4	7.7
Agency for International Development	220.6	220.6	220.6	220.6
Appalachian Regional Commission	0.9	0.0	0.6	0.5
Consumer Product Safety Commission	0.9	0.2	0.9	0.2
Environmental Protection Agency	485.3	488.5	485.3	488.5
Federal Communications Commission	2.0	1.8	2.0	1.8
Federal Trade Commission	6.0	7.3	6.0	7.3
Library of Congress	1.9	2.7	1.9	2.7

TABLE 4

Federal obligations and outlays for research and experimental development, by agency: FYs 2019–20

(Dollars in millions)

Agency	Obligations		Outlays	
	2019	2020 (preliminary)	2019	2020 (preliminary)
National Aeronautics and Space Administration	13,570.1	13,400.4	13,260.0	12,935.2
National Archives and Records Administration	0.5	0.0	0.5	0.0
National Science Foundation	5,996.1	6,156.6	5,273.0	5,414.0
Nuclear Regulatory Commission	74.9	65.3	74.9	65.3
Patient-Centered Outcomes Research Trust Fund	578.4	540.7	578.5	540.7
Smithsonian Institution	236.4	241.4	236.4	241.4
Social Security Administration	146.2	131.8	146.2	131.8
Tennessee Valley Authority	9.7	8.2	9.7	8.2
U.S. Agency for Global Media	6.1	6.2	6.1	6.2
U.S. Postal Service	26.7	26.6	26.7	26.6

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations or outlays in variables represented by this table appear in the table. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 5

Federal obligations for research and experimental development, by agency and type of R&D: FY 2019

(Dollars in thousands)

Agency	Total R&D	Basic research	Applied research	Experimental development		
				Total	Advanced technology	Major systems
All agencies	142,424,206.6	40,017,257.6	41,100,526.5	61,306,422.5	na	na
Departments						
Department of Agriculture	2,637,117.5	1,056,543.3	1,350,427.2	230,147.0	na	na
Agricultural Marketing Service	7,710.5	0.0	3,855.3	3,855.3	na	na
Agricultural Research Service	1,292,374.2	646,187.1	516,949.7	129,237.4	na	na
Animal and Plant Health Inspection Service	39,476.0	18,812.2	0.0	20,663.8	na	na
Economic Research Service	85,626.4	0.0	85,626.4	0.0	na	na
Forest Service	327,174.4	84,664.4	170,325.6	72,184.4	na	na
National Agricultural Statistics Service	9,469.1	0.0	5,263.0	4,206.1	na	na
National Institute of Food and Agriculture	871,374.4	306,879.6	564,494.8	0.0	na	na
Rural Business-Cooperative Service	3,912.5	0.0	3,912.5	0.0	na	na
Department of Commerce	1,534,715.8	253,176.4	1,028,763.0	252,776.5	na	na
National Institute of Standards and Technology	712,349.7	253,176.4	449,790.2	9,383.1	na	na
National Oceanic and Atmospheric Administration	718,863.6	0.0	541,827.6	177,036.0	na	na
National Telecommunications and Information Administration	7,900.0	0.0	7,900.0	0.0	na	na
U.S. Census Bureau	95,602.6	0.0	29,245.2	66,357.3	na	na
Department of Defense	58,779,506.7	2,510,170.5	5,758,234.9	50,511,101.4	6,923,229.2	43,587,872.3
Defense Advanced Research Projects Agency	3,320,955.0	478,318.0	1,264,987.0	1,577,650.0	1,411,522.0	166,128.0
Department of the Air Force	15,076,760.6	559,429.2	1,547,457.8	12,969,873.5	836,861.0	12,133,012.6
Department of the Army	10,274,787.1	494,668.0	1,461,518.3	8,318,600.8	1,636,954.0	6,681,646.8
Department of the Navy	15,341,234.6	655,662.5	935,022.4	13,750,549.8	1,008,189.3	12,742,360.5
Other defense agencies	14,765,769.4	322,092.8	549,249.3	13,894,427.3	2,029,702.9	11,864,724.4
Department of Education	235,843.1	57,276.0	131,380.1	47,187.0	na	na
Department of Energy	14,376,397.6	5,074,534.1	6,295,185.2	3,006,678.3	na	na
Advanced Research Projects Agency—Energy	404,954.5	0.0	202,477.3	202,477.3	na	na
Electricity Delivery and Energy Reliability	137,744.0	14,649.0	72,345.0	50,750.0	na	na
Energy Efficiency and Renewable Energy	1,695,831.0	0.0	1,270,334.0	425,497.0	na	na
Environmental Management	26,129.8	0.0	8,622.8	17,507.0	na	na
Fossil Energy	659,000.0	33,000.0	626,000.0	0.0	na	na
National Nuclear Security Administration	5,740,588.9	101,820.0	3,568,301.2	2,070,467.7	na	na
Defense Programs	3,660,447.3	0.0	3,434,107.1	226,340.2	na	na
Naval Nuclear Propulsion Program	1,788,618.0	0.0	0.0	1,788,618.0	na	na
Office of Defense Nuclear Nonproliferation	291,523.6	101,820.0	134,194.1	55,509.5	na	na
Nuclear Energy	606,393.0	0.0	378,272.7	228,120.4	na	na
Office of Cybersecurity, Energy Security, and Emergency Response	51,881.2	989.0	39,033.2	11,859.0	na	na
Office of Science	5,053,875.1	4,924,076.1	129,799.0	0.0	na	na
Department of Health and Human Services	39,191,188.6	19,099,834.2	19,254,566.8	836,787.6	na	na
Administration for Children and Families	2,254.8	0.0	2,254.8	0.0	na	na
Administration for Community Living	83,117.5	0.0	65,922.4	17,195.1	na	na
Agency for Healthcare Research and Quality	338,000.0	0.0	308,145.0	29,855.0	na	na

TABLE 5

Federal obligations for research and experimental development, by agency and type of R&D: FY 2019

(Dollars in thousands)

Agency	Total R&D	Basic research	Applied research	Experimental development		
				Total	Advanced technology	Major systems
Agency for Toxic Substances and Disease Registry	7,000.0	0.0	7,000.0	0.0	na	na
Biomedical Advanced Research and Development Authority	736,178.0	0.0	0.0	736,178.0	na	na
Centers for Disease Control and Prevention	419,425.9	77,206.4	288,660.1	53,559.4	na	na
Centers for Medicare and Medicaid Services	133,488.6	0.0	133,488.6	0.0	na	na
Food and Drug Administration	493,052.5	0.0	493,052.5	0.0	na	na
Health Resources and Services Administration	32,625.8	2,627.8	29,998.0	0.0	na	na
National Institutes of Health	36,929,000.0	19,020,000.0	17,909,000.0	0.0	na	na
Office of the Secretary of Health and Human Services	17,045.5	0.0	17,045.5	0.0	na	na
Office of the Assistant Secretary for Planning and Evaluation	17,045.5	0.0	17,045.5	0.0	na	na
Department of Homeland Security	647,153.2	46,283.8	233,243.0	367,626.4	na	na
Countering Weapons of Mass Destruction Office	81,421.6	5,376.7	25,817.5	50,227.4	na	na
Cybersecurity and Infrastructure Security Agency	13,126.0	0.0	13,126.0	0.0	na	na
Science and Technology Directorate	510,549.9	40,907.1	188,444.5	281,198.3	na	na
Transportation Security Administration	20,600.0	0.0	0.0	20,600.0	na	na
U.S. Coast Guard	19,516.0	0.0	5,855.0	13,661.0	na	na
U.S. Secret Service	1,939.7	0.0	0.0	1,939.7	na	na
Department of Housing and Urban Development	60,997.5	39,078.9	21,918.6	0.0	na	na
Department of the Interior	826,819.3	81,447.2	608,302.9	137,069.2	na	na
Bureau of Indian Affairs	5,000.0	0.0	5,000.0	0.0	na	na
Bureau of Land Management	20,757.0	867.0	12,857.0	7,033.0	na	na
Bureau of Ocean Energy Management	85,506.0	0.0	65,080.0	20,426.0	na	na
Bureau of Reclamation	23,167.0	0.0	16,514.0	6,653.0	na	na
Bureau of Safety and Environmental Enforcement	9,087.1	182.9	7,365.0	1,539.2	na	na
National Park Service	10,129.7	857.3	9,272.4	0.0	na	na
Office of Surface Mining Reclamation and Enforcement	327.5	0.0	327.5	0.0	na	na
U.S. Fish and Wildlife Service	32,650.0	0.0	32,650.0	0.0	na	na
U.S. Geological Survey	640,195.0	79,540.0	459,237.0	101,418.0	na	na
Department of Justice	121,221.9	21,228.1	84,168.4	15,825.5	na	na
Bureau of Prisons	6,596.0	0.0	1,249.0	5,347.0	na	na
Federal Bureau of Investigation	998.4	0.0	998.4	0.0	na	na
Office of Justice Programs	113,627.5	21,228.1	81,920.9	10,478.5	na	na
Department of Labor	4,366.1	0.0	4,366.1	0.0	na	na
Employee Benefits Security Administration	2,642.1	0.0	2,642.1	0.0	na	na
Occupational Safety and Health Administration	1,724.0	0.0	1,724.0	0.0	na	na
Department of State	62,200.0	0.0	62,200.0	0.0	na	na
Department of Transportation	1,012,477.7	0.0	745,596.2	266,881.6	na	na
Federal Aviation Administration	387,021.1	0.0	193,114.6	193,906.5	na	na

TABLE 5

Federal obligations for research and experimental development, by agency and type of R&D: FY 2019

(Dollars in thousands)

Agency	Total R&D	Basic research	Applied research	Experimental development		
				Total	Advanced technology	Major systems
Federal Highway Administration	451,624.9	0.0	414,879.6	36,745.3	na	na
Federal Motor Carrier Safety Administration	7,766.4	0.0	7,766.4	0.0	na	na
Federal Railroad Administration	39,427.3	0.0	31,936.1	7,491.2	na	na
Federal Transit Administration	2,750.0	0.0	2,750.0	0.0	na	na
National Highway Traffic Safety Administration	76,323.0	0.0	76,323.0	0.0	na	na
Office of the Secretary of Transportation	19,776.0	0.0	8,210.9	11,565.1	na	na
Pipeline and Hazardous Materials Safety Administration	27,789.1	0.0	10,615.6	17,173.4	na	na
Department of the Treasury	57,143.8	10,298.9	35,878.8	10,966.1	na	na
Bureau of Engraving and Printing	56,966.1	10,285.0	35,715.0	10,966.1	na	na
U.S. Mint	177.7	13.9	163.8	0.0	na	na
Department of Veterans Affairs	1,507,870.1	629,101.4	848,504.3	30,264.4	na	na
Other agencies						
Administrative Office of the U.S. Courts	6,448.3	0.0	6,448.3	0.0	na	na
Agency for International Development	220,588.2	0.0	171,713.9	48,874.4	na	na
Appalachian Regional Commission	898.9	0.0	898.9	0.0	na	na
Consumer Product Safety Commission	856.3	0.0	856.3	0.0	na	na
Environmental Protection Agency	485,305.0	0.0	404,784.0	80,521.0	na	na
Federal Communications Commission	2,005.3	0.0	2,005.3	0.0	na	na
Federal Trade Commission	6,003.2	0.0	6,003.2	0.0	na	na
Library of Congress	1,892.5	0.0	867.6	1,024.9	na	na
National Aeronautics and Space Administration	13,570,133.5	5,688,975.1	2,422,519.2	5,458,639.2	na	na
National Archives and Records Administration	511.0	0.0	511.0	0.0	na	na
National Science Foundation	5,996,140.0	5,212,090.0	784,050.0	0.0	na	na
Nuclear Regulatory Commission	74,856.6	780.0	74,076.6	0.0	na	na
Patient-Centered Outcomes Research Trust Fund	578,430.5	0.0	578,430.5	0.0	na	na
Smithsonian Institution	236,440.0	236,440.0	0.0	0.0	na	na
Social Security Administration	146,241.0	0.0	146,241.0	0.0	na	na
Tennessee Valley Authority	9,666.0	0.0	5,614.0	4,052.0	na	na
U.S. Agency for Global Media	6,107.0	0.0	6,107.0	0.0	na	na
U.S. Postal Service	26,664.2	0.0	26,664.2	0.0	na	na

na = not applicable; data were not collected at this level of detail for this agency or subagency.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 6

Preliminary federal obligations for research and experimental development, by agency and type of R&D: FY 2020

(Dollars in thousands)

Agency	Total R&D	Basic research	Applied research	Experimental development		
				Total	Advanced technology	Major systems
All agencies	150,884,687.7	41,755,263.7	43,507,176.5	65,622,247.5	na	na
Departments						
Department of Agriculture	2,904,213.9	1,182,931.5	1,506,354.8	214,927.7	na	na
Agricultural Marketing Service	6,952.5	0.0	3,476.3	3,476.3	na	na
Agricultural Research Service	1,414,000.0	707,000.0	565,600.0	141,400.0	na	na
Animal and Plant Health Inspection Service	39,542.0	18,856.0	0.0	20,686.0	na	na
Economic Research Service	85,257.0	0.0	85,257.0	0.0	na	na
Foreign Agricultural Service	500.0	0.0	500.0	0.0	na	na
Forest Service	305,000.0	86,075.5	173,164.4	45,760.1	na	na
National Agricultural Statistics Service	9,013.2	0.0	5,407.9	3,605.3	na	na
National Institute of Food and Agriculture	1,040,000.0	371,000.0	669,000.0	0.0	na	na
Rural Business-Cooperative Service	3,949.2	0.0	3,949.2	0.0	na	na
Department of Commerce	1,621,817.1	261,901.9	1,108,527.7	251,387.5	na	na
National Institute of Standards and Technology	768,393.9	261,901.9	486,034.6	20,457.4	na	na
National Oceanic and Atmospheric Administration	725,405.0	0.0	575,822.0	149,583.0	na	na
National Telecommunications and Information Administration	8,180.0	0.0	8,180.0	0.0	na	na
U.S. Census Bureau	119,838.1	0.0	38,491.0	81,347.1	na	na
Department of Defense	62,461,330.4	2,564,726.7	5,900,212.4	53,996,391.4	7,301,773.5	46,694,617.9
Defense Advanced Research Projects Agency	3,667,188.0	481,562.0	1,513,218.0	1,672,408.0	1,536,893.0	135,515.0
Department of the Air Force	15,621,751.0	503,429.8	1,661,346.3	13,456,974.9	942,258.3	12,514,716.6
Department of the Army	10,754,758.3	550,851.8	1,261,958.7	8,941,947.8	1,498,111.8	7,443,836.0
Department of the Navy	16,787,023.8	637,091.0	909,697.8	15,240,235.0	981,995.9	14,258,239.1
Other defense agencies	15,630,609.3	391,792.1	553,991.6	14,684,825.6	2,342,514.4	12,342,311.1
Department of Education	242,197.6	58,656.1	132,645.0	50,896.5	na	na
Department of Energy	16,136,020.8	5,482,587.4	7,199,120.3	3,454,313.1	na	na
Advanced Research Projects Agency—Energy	425,000.0	0.0	212,500.0	212,500.0	na	na
Electricity Delivery and Energy Reliability	153,869.0	15,404.0	67,881.0	70,584.0	na	na
Energy Efficiency and Renewable Energy	2,566,629.0	0.0	1,546,376.0	1,020,253.0	na	na
Environmental Management	11,569.9	0.0	3,818.1	7,751.8	na	na
Fossil Energy	680,000.0	34,000.0	646,000.0	0.0	na	na
National Nuclear Security Administration	6,319,625.9	106,658.4	4,264,122.2	1,948,845.3	na	na
Defense Programs	4,367,770.0	0.0	4,131,021.0	236,749.0	na	na
Naval Nuclear Propulsion Program	1,648,396.0	0.0	0.0	1,648,396.0	na	na
Office of Defense Nuclear Nonproliferation	303,459.9	106,658.4	133,101.2	63,700.3	na	na
Nuclear Energy	610,550.0	0.0	435,425.1	175,124.9	na	na
Office of Cybersecurity, Energy Security, and Emergency Response	43,857.0	1,605.0	22,998.0	19,254.0	na	na
Office of Science	5,324,920.0	5,324,920.0	0.0	0.0	na	na
Department of Health and Human Services	41,561,685.5	20,477,268.2	20,265,691.5	818,725.8	na	na
Administration for Children and Families	1,575.0	0.0	1,575.0	0.0	na	na
Administration for Community Living	90,217.8	0.0	71,822.2	18,395.6	na	na
Agency for Healthcare Research and Quality	308,145.0	0.0	308,145.0	0.0	na	na

TABLE 6

Preliminary federal obligations for research and experimental development, by agency and type of R&D: FY 2020

(Dollars in thousands)

Agency	Total R&D	Basic research	Applied research	Experimental development		
				Total	Advanced technology	Major systems
Agency for Toxic Substances and Disease Registry	7,000.0	0.0	7,000.0	0.0	na	na
Biomedical Advanced Research and Development Authority	747,036.5	0.0	0.0	747,036.5	na	na
Centers for Disease Control and Prevention	405,189.4	87,906.2	263,989.5	53,293.7	na	na
Centers for Medicare and Medicaid Services	136,000.0	0.0	136,000.0	0.0	na	na
Food and Drug Administration	495,000.0	0.0	495,000.0	0.0	na	na
Health Resources and Services Administration	31,521.8	2,362.0	29,159.8	0.0	na	na
National Institutes of Health	39,323,000.0	20,387,000.0	18,936,000.0	0.0	na	na
Office of the Secretary of Health and Human Services	17,000.0	0.0	17,000.0	0.0	na	na
Office of the Assistant Secretary for Planning and Evaluation	17,000.0	0.0	17,000.0	0.0	na	na
Department of Homeland Security	507,723.2	45,280.0	187,657.5	274,785.8	na	na
Countering Weapons of Mass Destruction Office	41,363.9	4,280.0	19,741.5	17,342.4	na	na
Cybersecurity and Infrastructure Security Agency	14,431.0	0.0	14,431.0	0.0	na	na
Science and Technology Directorate	422,000.0	41,000.0	152,000.0	229,000.0	na	na
Transportation Security Administration	22,900.0	0.0	0.0	22,900.0	na	na
U.S. Coast Guard	4,949.0	0.0	1,485.0	3,464.0	na	na
U.S. Secret Service	2,079.4	0.0	0.0	2,079.4	na	na
Department of Housing and Urban Development	88,610.0	57,874.8	30,735.2	0.0	na	na
Department of the Interior	882,691.0	83,937.8	633,996.4	164,756.8	na	na
Bureau of Indian Affairs	5,000.0	0.0	5,000.0	0.0	na	na
Bureau of Land Management	20,755.0	867.0	12,856.0	7,032.0	na	na
Bureau of Ocean Energy Management	96,895.0	0.0	67,232.0	29,663.0	na	na
Bureau of Reclamation	36,350.0	0.0	17,500.0	18,850.0	na	na
Bureau of Safety and Environmental Enforcement	15,485.5	228.4	13,334.8	1,922.3	na	na
National Park Service	10,231.0	865.9	9,365.1	0.0	na	na
Office of Surface Mining Reclamation and Enforcement	510.0	0.0	510.0	0.0	na	na
U.S. Fish and Wildlife Service	32,650.0	0.0	32,650.0	0.0	na	na
U.S. Geological Survey	664,814.5	81,976.6	475,548.5	107,289.5	na	na
Department of Justice	107,018.2	21,652.6	68,905.5	16,460.1	na	na
Bureau of Prisons	7,048.0	0.0	1,276.0	5,772.0	na	na
Federal Bureau of Investigation	1,003.7	0.0	1,003.7	0.0	na	na
Office of Justice Programs	98,966.5	21,652.6	66,625.9	10,688.1	na	na
Department of Labor	4,652.0	0.0	4,652.0	0.0	na	na
Employee Benefits Security Administration	2,895.3	0.0	2,895.3	0.0	na	na
Occupational Safety and Health Administration	1,756.8	0.0	1,756.8	0.0	na	na
Department of State	62,300.0	0.0	62,300.0	0.0	na	na
Department of Transportation	1,335,228.7	0.0	913,281.4	421,947.3	na	na
Federal Aviation Administration	692,146.9	0.0	348,223.5	343,923.4	na	na

TABLE 6

Preliminary federal obligations for research and experimental development, by agency and type of R&D: FY 2020

(Dollars in thousands)

Agency	Total R&D	Basic research	Applied research	Experimental development		
				Total	Advanced technology	Major systems
Federal Highway Administration	417,706.8	0.0	391,860.3	25,846.6	na	na
Federal Motor Carrier Safety Administration	11,102.4	0.0	11,102.4	0.0	na	na
Federal Railroad Administration	38,264.0	0.0	32,243.4	6,020.7	na	na
Federal Transit Administration	20,000.0	0.0	20,000.0	0.0	na	na
National Highway Traffic Safety Administration	74,240.7	0.0	74,240.7	0.0	na	na
Office of the Secretary of Transportation	26,957.4	0.0	15,112.7	11,844.7	na	na
Pipeline and Hazardous Materials Safety Administration	54,810.4	0.0	20,498.4	34,312.0	na	na
Department of the Treasury	60,570.4	5,625.1	43,979.2	10,966.1	na	na
Bureau of Engraving and Printing	60,394.8	5,521.0	43,907.7	10,966.1	na	na
U.S. Mint	175.6	104.1	71.5	0.0	na	na
Department of Veterans Affairs	1,602,688.1	668,843.9	901,667.9	32,176.3	na	na
Other agencies						
Administrative Office of the U.S. Courts	7,671.6	0.0	7,671.6	0.0	na	na
Agency for International Development	220,588.2	0.0	171,713.9	48,874.4	na	na
Consumer Product Safety Commission	200.0	0.0	200.0	0.0	na	na
Environmental Protection Agency	488,501.0	0.0	411,906.4	76,594.6	na	na
Federal Communications Commission	1,800.0	0.0	1,800.0	0.0	na	na
Federal Trade Commission	7,324.8	0.0	7,324.8	0.0	na	na
Library of Congress	2,731.2	0.0	1,114.3	1,616.9	na	na
National Aeronautics and Space Administration	13,400,404.7	5,259,592.0	2,355,696.2	5,785,116.6	na	na
National Science Foundation	6,156,565.0	5,342,150.0	814,415.0	0.0	na	na
Nuclear Regulatory Commission	65,286.1	795.7	64,490.4	0.0	na	na
Patient-Centered Outcomes Research Trust Fund	540,670.0	0.0	540,670.0	0.0	na	na
Smithsonian Institution	241,440.0	241,440.0	0.0	0.0	na	na
Social Security Administration	131,774.0	0.0	131,774.0	0.0	na	na
Tennessee Valley Authority	8,191.0	0.0	5,880.0	2,311.0	na	na
U.S. Agency for Global Media	6,198.0	0.0	6,198.0	0.0	na	na
U.S. Postal Service	26,595.0	0.0	26,595.0	0.0	na	na

na = not applicable; data were not collected at this level of detail for this agency or subagency.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 7

Federal obligations for research and experimental development, by agency and performer: FY 2019

(Dollars in millions)

Agency	Total R&D	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
All agencies	142,424.2	39,312.8	44,446.0	6,077.6	34,000.5	5,351.9	8,450.2	3,261.5	586.5	937.2
Departments										
Department of Agriculture	2,637.1	1,643.9	32.0	0.0	911.2	0.0	39.8	0.0	7.1	3.1
Agricultural Marketing Service	7.7	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agricultural Research Service	1,292.4	1,147.4	0.0	0.0	127.3	0.0	14.3	0.0	0.3	3.0
Animal and Plant Health Inspection Service	39.5	28.6	0.0	0.0	10.9	0.0	0.0	0.0	0.0	0.0
Economic Research Service	85.6	73.9	5.7	0.0	3.7	0.0	2.2	0.0	*	0.1
Forest Service	327.2	300.0	0.4	0.0	17.8	0.0	2.5	0.0	6.5	*
National Agricultural Statistics Service	9.5	8.7	0.0	0.0	0.4	0.0	0.4	0.0	0.0	0.0
National Institute of Food and Agriculture	871.4	77.6	25.9	0.0	750.1	0.0	17.6	0.0	0.3	0.0
Rural Business-Cooperative Service	3.9	0.0	0.0	0.0	1.1	0.0	2.8	0.0	0.0	0.0
Department of Commerce	1,534.7	1,102.1	38.6	0.0	335.9	9.9	24.6	19.5	2.8	1.4
National Institute of Standards and Technology	712.3	602.3	35.0	0.0	51.1	0.0	3.3	19.2	0.1	1.4
National Oceanic and Atmospheric Administration	718.9	396.3	3.6	0.0	284.8	9.9	21.3	0.3	2.6	*
National Telecommunications and Information Administration	7.9	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Census Bureau	95.6	95.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Defense	58,779.5	20,314.5	32,232.7	380.0	3,285.8	450.7	820.0	720.5	31.6	543.7
Defense Advanced Research Projects Agency	3,321.0	344.0	2,076.1	38.2	600.4	55.7	129.7	27.8	0.7	48.4
Department of the Air Force	15,076.8	4,321.7	9,558.3	103.7	549.8	82.4	45.1	278.7	8.7	128.4
Department of the Army	10,274.8	3,834.4	5,524.1	7.7	498.5	27.7	258.4	63.2	1.9	58.9
Department of the Navy	15,341.2	6,066.6	7,861.1	34.5	952.3	43.2	224.1	102.6	1.1	55.7
Other defense agencies	14,765.8	5,747.7	7,213.1	195.9	684.8	241.7	162.7	248.2	19.3	252.3
Department of Education	235.8	10.4	14.7	0.0	156.8	0.0	52.4	0.0	1.5	0.0
Department of Energy	14,376.4	1,052.3	2,126.4	5,170.6	1,458.7	2,240.0	88.8	2,221.8	15.8	1.9

TABLE 7

Federal obligations for research and experimental development, by agency and performer: FY 2019

(Dollars in millions)

Agency	Total R&D	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Advanced Research Projects Agency—Energy	405.0	0.0	171.2	21.2	163.2	10.7	13.9	24.7	0.0	0.0
Electricity Delivery and Energy Reliability	137.7	3.1	9.1	32.1	16.3	13.8	9.6	53.2	0.4	0.0
Energy Efficiency and Renewable Energy	1,695.8	0.0	395.5	127.6	410.8	179.7	0.0	568.0	14.2	0.0
Environmental Management	26.1	0.0	6.6	5.2	14.1	0.2	0.0	0.0	0.0	0.0
Fossil Energy	659.0	601.0	0.0	13.0	33.0	10.0	0.0	2.0	0.0	0.0
National Nuclear Security Administration	5,740.6	173.0	979.5	4,442.2	14.7	16.9	46.0	68.1	0.1	0.0
Defense Programs	3,660.4	173.0	950.8	2,483.1	1.0	0.9	46.0	5.7	0.0	0.0
Naval Nuclear Propulsion Program	1,788.6	0.0	0.0	1,788.6	0.0	0.0	0.0	0.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	291.5	0.0	28.8	170.5	13.8	16.0	0.0	62.4	0.1	0.0
Nuclear Energy	606.4	2.6	132.7	294.3	31.3	30.1	0.0	114.7	0.0	0.6
Office of Cybersecurity, Energy Security, and Emergency Response	51.9	*	30.2	11.3	3.5	0.0	0.0	6.9	0.0	0.0
Office of Science	5,053.9	272.5	401.6	223.7	771.8	1,978.5	19.3	1,384.1	1.2	1.2
Department of Health and Human Services	39,191.2	7,753.2	2,718.5	495.7	21,594.7	20.6	6,036.6	32.2	274.8	265.0
Administration for Children and Families	2.3	0.2	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0
Administration for Community Living	83.1	0.0	3.3	0.0	64.5	0.0	14.8	0.0	0.4	0.0
Agency for Healthcare Research and Quality	338.0	76.8	130.3	0.0	100.7	0.0	30.1	0.0	0.1	0.0
Agency for Toxic Substances and Disease Registry	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0
Biomedical Advanced Research and Development Authority	736.2	0.0	655.2	0.0	58.1	0.0	22.9	0.0	0.0	0.0
Centers for Disease Control and Prevention	419.4	140.3	25.9	0.0	158.8	0.0	42.8	0.3	30.3	21.0

TABLE 7

Federal obligations for research and experimental development, by agency and performer: FY 2019

(Dollars in millions)

Agency	Total R&D	Intramural ^a	Extramural							Foreign
			United States and U.S. territories							
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Centers for Medicare and Medicaid Services	133.5	0.0	0.0	0.0	11.6	0.0	0.0	*	121.9	0.0
Food and Drug Administration	493.1	360.5	11.5	0.0	72.3	0.0	39.7	0.0	2.1	7.1
Health Resources and Services Administration	32.6	4.2	0.0	0.0	24.0	0.0	4.4	0.0	0.0	0.0
National Institutes of Health	36,929.0	7,168.4	1,886.8	495.7	21,102.5	20.6	5,873.3	31.9	112.9	236.9
Office of the Secretary of Health and Human Services	17.0	2.8	5.5	0.0	2.1	0.0	6.6	0.0	0.0	0.0
Office of the Assistant Secretary for Planning and Evaluation	17.0	2.8	5.5	0.0	2.1	0.0	6.6	0.0	0.0	0.0
Department of Homeland Security	647.2	179.9	360.9	13.4	23.1	6.3	3.6	49.7	0.2	10.0
Countering Weapons of Mass Destruction Office	81.4	3.3	41.3	10.8	6.7	4.8	0.3	8.0	0.0	6.3
Cybersecurity and Infrastructure Security Agency	13.1	1.7	1.9	2.6	1.2	0.3	0.9	4.5	0.0	0.0
Science and Technology Directorate	510.5	162.4	289.1	0.0	15.1	0.9	2.4	36.7	0.2	3.7
Transportation Security Administration	20.6	0.0	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Coast Guard	19.5	12.6	6.3	0.0	0.1	0.0	0.0	0.5	0.0	0.0
U.S. Secret Service	1.9	0.0	1.7	0.0	0.0	0.3	0.0	0.0	0.0	0.0
Department of Housing and Urban Development	61.0	42.9	11.4	0.0	1.6	0.0	5.1	0.0	0.0	0.0
Department of the Interior	826.8	695.0	19.5	0.0	63.3	0.3	2.9	0.3	42.7	2.8
Bureau of Indian Affairs	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Bureau of Land Management	20.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.8	0.0
Bureau of Ocean Energy Management	85.5	62.5	13.0	0.0	6.8	0.0	0.2	0.0	0.2	2.7
Bureau of Reclamation	23.2	14.9	1.9	0.0	5.1	0.3	0.3	0.3	0.3	0.0
Bureau of Safety and Environmental Enforcement	9.1	2.7	4.2	0.0	0.7	0.0	0.8	0.0	0.6	0.1
National Park Service	10.1	0.0	*	0.0	10.0	0.0	0.1	0.0	0.0	0.0

Federal obligations for research and experimental development, by agency and performer: FY 2019

[illegible]

TABLE 7

Federal obligations for research and experimental development, by agency and performer: FY 2019

(Dollars in millions)

Agency	Total R&D	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Administrative Office of the U.S. Courts	6.4	0.0	0.0	0.0	0.0	0.0	0.0	6.4	0.0	0.0
Agency for International Development	220.6	21.0	22.0	0.0	57.7	0.0	72.9	0.0	0.0	47.0
Appalachian Regional Commission	0.9	0.0	0.3	0.0	0.5	0.0	0.1	0.0	0.0	0.0
Consumer Product Safety Commission	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Environmental Protection Agency	485.3	249.4	182.7	0.5	51.8	0.7	0.0	0.2	0.0	0.0
Federal Communications Commission	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Federal Trade Commission	6.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Library of Congress	1.9	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	13,570.1	4,144.6	5,773.3	5.0	916.9	2,315.9	337.0	38.0	6.0	33.3
National Archives and Records Administration	0.5	0.4	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
National Science Foundation	5,996.1	36.7	403.2	0.0	4,918.7	303.2	289.8	5.7	13.8	25.1
Nuclear Regulatory Commission	74.9	30.3	8.8	12.4	0.6	4.0	0.8	14.6	0.0	3.4
Patient-Centered Outcomes Research Trust Fund	578.4	0.0	0.0	0.0	0.0	0.0	578.4	0.0	0.0	0.0
Smithsonian Institution	236.4	236.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Social Security Administration	146.2	90.9	42.6	0.0	9.3	0.0	3.4	0.0	*	0.1
Tennessee Valley Authority	9.7	0.0	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Agency for Global Media	6.1	0.0	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Postal Service	26.7	0.0	24.7	0.0	2.0	0.0	0.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50,000.

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.**Note(s):**Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 8

Preliminary federal obligations for research and experimental development, by agency and performer: FY 2020

(Dollars in millions)

Agency	Total R&D	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
All agencies	150,884.7	42,404.9	46,497.8	6,483.8	36,091.9	5,240.7	8,951.4	3,629.7	564.2	1,020.4
Departments										
Department of Agriculture	2,904.2	1,792.9	37.0	0.0	1,025.1	0.0	39.9	0.0	7.0	2.3
Agricultural Marketing Service	7.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agricultural Research Service	1,414.0	1,305.3	0.0	0.0	95.5	0.0	10.7	0.0	0.3	2.2
Animal and Plant Health Inspection Service	39.5	28.6	0.0	0.0	10.9	0.0	0.0	0.0	0.0	0.0
Economic Research Service	85.3	73.6	5.7	0.0	3.7	0.0	2.2	0.0	*	0.0
Foreign Agricultural Service	0.5	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
Forest Service	305.0	277.8	0.4	0.0	17.8	0.0	2.5	0.0	6.5	*
National Agricultural Statistics Service	9.0	8.0	0.0	0.0	0.4	0.0	0.6	0.0	0.0	0.0
National Institute of Food and Agriculture	1,040.0	92.6	30.9	0.0	895.2	0.0	21.0	0.0	0.3	0.0
Rural Business-Cooperative Service	3.9	0.0	0.0	0.0	1.1	0.0	2.8	0.0	0.0	0.0
Department of Commerce	1,621.8	1,155.3	60.7	0.3	364.7	5.2	8.4	19.6	5.6	2.0
National Institute of Standards and Technology	768.4	624.7	48.4	0.0	65.0	0.0	5.9	19.6	2.8	2.0
National Oceanic and Atmospheric Administration	725.4	402.5	12.3	0.3	299.7	5.2	2.6	0.0	2.8	*
National Telecommunications and Information Administration	8.2	8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Census Bureau	119.8	119.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Defense	62,461.3	21,826.4	34,193.3	404.3	3,320.4	445.8	1,010.4	688.3	12.0	560.4
Defense Advanced Research Projects Agency	3,667.2	395.5	2,268.5	42.7	667.7	62.3	145.7	31.0	0.8	53.1
Department of the Air Force	15,621.8	4,590.4	9,888.2	125.0	521.8	50.6	50.7	237.9	6.7	150.3
Department of the Army	10,754.8	4,060.8	5,760.9	9.8	512.6	27.5	256.2	67.2	2.1	57.7
Department of the Navy	16,787.0	6,713.2	8,597.9	89.9	976.9	45.1	226.5	84.7	1.0	51.7
Other defense agencies	15,630.6	6,066.6	7,677.8	136.8	641.3	260.2	331.4	267.5	1.3	247.6
Department of Education	242.2	10.4	5.8	0.0	168.1	0.0	56.6	0.5	0.8	0.0
Department of Energy	16,136.0	1,358.0	2,328.7	5,528.8	1,809.2	2,414.0	76.6	2,568.8	52.0	0.0

TABLE 8

Preliminary federal obligations for research and experimental development, by agency and performer: FY 2020

(Dollars in millions)

Agency	Total R&D	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Advanced Research Projects Agency—Energy	425.0	0.0	179.7	22.2	171.2	11.3	14.6	26.0	0.0	0.0
Electricity Delivery and Energy Reliability	153.9	3.5	10.1	35.9	18.2	15.4	10.8	59.4	0.5	0.0
Energy Efficiency and Renewable Energy	2,566.6	0.0	598.6	193.1	621.8	272.0	0.0	859.7	21.4	0.0
Environmental Management	11.6	0.0	3.2	2.4	4.8	0.6	0.0	0.5	0.0	0.0
Fossil Energy	680.0	605.0	0.0	13.0	34.0	9.0	0.0	19.0	0.0	0.0
National Nuclear Security Administration	6,319.6	243.3	993.1	4,860.8	94.1	14.0	39.7	74.6	0.1	0.0
Defense Programs	4,367.8	233.3	969.7	3,039.5	80.4	0.4	39.7	4.9	0.0	0.0
Naval Nuclear Propulsion Program	1,648.4	0.0	0.0	1,648.4	0.0	0.0	0.0	0.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	303.5	10.0	23.4	172.9	13.8	13.6	0.0	69.7	0.1	0.0
Nuclear Energy	610.6	1.4	263.1	195.9	58.3	32.4	0.0	59.4	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	43.9	*	31.8	6.0	0.0	5.0	1.0	0.0	0.0	0.0
Office of Science	5,324.9	504.8	249.1	199.4	806.7	2,054.3	10.5	1,470.2	30.0	0.0
Department of Health and Human Services	41,561.7	8,182.7	2,885.4	527.9	22,916.5	22.8	6,424.0	34.0	281.9	286.4
Administration for Children and Families	1.6	0.6	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
Administration for Community Living	90.2	0.0	3.7	0.0	62.5	0.0	23.5	0.0	0.5	0.0
Agency for Healthcare Research and Quality	308.1	48.3	131.5	0.0	98.7	0.0	29.6	0.0	0.1	0.0
Agency for Toxic Substances and Disease Registry	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0
Biomedical Advanced Research and Development Authority	747.0	0.0	718.4	0.0	7.3	0.0	21.3	0.0	0.0	0.0
Centers for Disease Control and Prevention	405.2	132.5	5.7	0.0	167.3	0.9	43.9	0.0	28.0	27.0

TABLE 8

Preliminary federal obligations for research and experimental development, by agency and performer: FY 2020

(Dollars in millions)

Agency	Total R&D	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Centers for Medicare and Medicaid Services	136.0	0.0	0.0	0.0	12.0	0.0	0.0	0.0	124.0	0.0
Food and Drug Administration	495.0	361.9	11.5	0.0	72.6	0.0	39.8	0.0	2.1	7.1
Health Resources and Services Administration	31.5	3.7	0.0	0.0	23.5	0.0	4.4	0.0	0.0	0.0
National Institutes of Health	39,323.0	7,633.1	2,009.1	527.9	22,470.5	21.9	6,254.0	34.0	120.2	252.3
Office of the Secretary of Health and Human Services	17.0	2.8	5.5	0.0	2.1	0.0	6.6	0.0	0.0	0.0
Office of the Assistant Secretary for Planning and Evaluation	17.0	2.8	5.5	0.0	2.1	0.0	6.6	0.0	0.0	0.0
Department of Homeland Security	507.7	143.9	271.3	8.2	21.3	7.1	23.4	27.8	0.0	4.7
Countering Weapons of Mass Destruction Office	41.4	4.0	14.4	7.0	4.3	4.8	0.6	1.7	0.0	4.7
Cybersecurity and Infrastructure Security Agency	14.4	4.5	0.7	1.3	0.0	0.0	2.8	5.2	0.0	0.0
Science and Technology Directorate	422.0	132.0	230.0	0.0	17.0	2.0	20.0	21.0	0.0	0.0
Transportation Security Administration	22.9	0.0	22.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Coast Guard	4.9	3.4	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Secret Service	2.1	0.0	1.8	0.0	0.0	0.3	0.0	0.0	0.0	0.0
Department of Housing and Urban Development	88.6	40.8	29.1	0.0	5.1	0.0	13.6	0.0	0.0	0.0
Department of the Interior	882.7	750.9	18.1	0.0	65.1	0.3	3.6	0.3	42.6	1.8
Bureau of Indian Affairs	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Bureau of Land Management	20.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.8	0.0
Bureau of Ocean Energy Management	96.9	78.8	10.8	0.0	4.9	0.0	0.4	0.0	0.2	1.8
Bureau of Reclamation	36.4	29.0	0.7	0.0	5.5	0.3	0.3	0.3	0.3	0.0
Bureau of Safety and Environmental Enforcement	15.5	4.9	6.3	0.0	2.9	0.0	1.4	0.0	0.0	0.0
National Park Service	10.2	0.0	*	0.0	10.1	0.0	0.1	0.0	0.0	0.0

Preliminary federal obligations for research and experimental development, by agency and performer: FY 2020

[illegible]

TABLE 8

Preliminary federal obligations for research and experimental development, by agency and performer: FY 2020

(Dollars in millions)

Agency	Total R&D	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Administrative Office of the U.S. Courts	7.7	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	0.0
Agency for International Development	220.6	21.0	22.0	0.0	58.7	0.0	72.9	0.0	0.0	46.0
Consumer Product Safety Commission	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Environmental Protection Agency	488.5	244.6	192.2	0.0	51.6	0.0	0.0	0.0	0.0	0.0
Federal Communications Commission	1.8	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Federal Trade Commission	7.3	7.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Library of Congress	2.7	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	13,400.4	4,630.9	5,355.7	4.1	986.0	2,030.7	282.5	36.0	4.4	70.1
National Science Foundation	6,156.6	37.6	415.5	0.0	5,048.9	310.8	298.0	5.8	14.2	25.7
Nuclear Regulatory Commission	65.3	31.3	8.0	10.2	0.6	2.4	0.1	11.8	0.0	0.9
Patient-Centered Outcomes Research Trust Fund	540.7	0.0	0.0	0.0	0.0	0.0	540.7	0.0	0.0	0.0
Smithsonian Institution	241.4	241.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Social Security Administration	131.8	63.0	55.4	0.0	10.3	0.0	3.2	0.0	0.0	0.0
Tennessee Valley Authority	8.2	0.0	8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Agency for Global Media	6.2	0.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Postal Service	26.6	0.0	24.6	0.0	2.0	0.0	0.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50,000.

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.**Note(s):**

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 9

Department of Defense obligations for research, development, test, and evaluation, by agency and performer: FY 2019

(Dollars in millions)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Department of Defense										
RDT&E	93,956.4	28,515.2	58,554.4	432.8	3,413.3	531.3	893.4	943.1	31.6	641.5
Total research	8,268.4	2,604.5	2,804.4	61.6	2,161.5	89.1	357.8	71.6	3.6	114.5
Basic research	2,510.2	572.1	327.4	13.9	1,373.4	9.3	106.2	21.6	2.5	83.8
Applied research	5,758.2	2,032.4	2,477.1	47.7	788.0	79.8	251.6	50.0	1.1	30.7
Total experimental development ^b	50,511.1	17,710.0	29,428.3	318.4	1,124.4	361.6	462.2	648.9	27.9	429.3
Advanced technology	6,923.2	2,636.4	3,433.9	63.4	327.2	82.5	248.4	56.8	2.2	72.4
Major systems	43,587.9	15,073.7	25,994.4	255.0	797.1	279.1	213.9	592.1	25.7	356.9
Total operational systems development ^c	35,176.9	8,200.7	26,321.6	52.8	127.4	80.6	73.4	222.6	0.0	97.7
Defense Advanced Research Projects Agency										
RDT&E	3,321.0	344.0	2,076.1	38.2	600.4	55.7	129.7	27.8	0.7	48.4
Total research	1,743.3	81.2	880.7	25.3	557.7	26.6	114.3	20.3	0.7	36.5
Basic research	478.3	14.9	138.4	8.7	242.7	6.0	41.2	7.7	0.0	18.8
Applied research	1,265.0	66.3	742.3	16.7	315.0	20.6	73.1	12.6	0.7	17.7
Total experimental development ^b	1,577.7	262.9	1,195.3	12.9	42.7	29.1	15.4	7.5	0.0	11.9
Advanced technology	1,411.5	201.9	1,090.1	12.9	42.7	29.1	15.4	7.5	0.0	11.9
Major systems	166.1	60.9	105.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total operational systems development ^c	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Air Force										
RDT&E	40,178.8	6,047.2	32,589.3	123.7	572.8	154.3	49.9	448.5	8.7	184.3
Total research	2,106.9	911.6	647.9	2.2	470.1	2.2	33.3	5.7	0.5	33.3
Basic research	559.4	100.5	60.2	0.1	360.5	0.2	3.4	1.1	0.0	33.3
Applied research	1,547.5	811.2	587.7	2.1	109.6	2.0	29.8	4.6	0.5	0.0
Total experimental development ^b	12,969.9	3,410.1	8,910.4	101.4	79.7	80.2	11.8	273.0	8.2	95.0
Advanced technology	836.9	364.3	442.7	0.7	15.2	0.2	6.2	7.6	0.1	0.0

TABLE 9

Department of Defense obligations for research, development, test, and evaluation, by agency and performer: FY 2019

(Dollars in millions)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Major systems	12,133.0	3,045.8	8,467.7	100.8	64.6	80.0	5.6	265.4	8.1	95.0
Total operational systems development ^c	25,102.0	1,725.5	23,030.9	20.1	23.0	72.0	4.9	169.8	0.0	55.9
Department of the Army										
RDT&E	12,024.8	4,590.5	6,463.1	7.7	509.2	29.0	295.9	66.0	1.9	61.6
Total research	1,956.2	707.7	784.4	0.6	353.5	2.8	81.6	13.4	1.9	10.2
Basic research	494.7	159.2	65.6	0.0	237.9	0.2	12.1	9.8	1.9	7.9
Applied research	1,461.5	548.5	718.8	0.6	115.5	2.6	69.5	3.7	0.0	2.3
Total experimental development ^b	8,318.6	3,126.6	4,739.7	7.1	145.0	24.9	176.8	49.8	*	48.7
Advanced technology	1,637.0	687.4	811.0	*	69.1	4.4	56.1	2.4	0.0	6.6
Major systems	6,681.6	2,439.3	3,928.7	7.1	75.9	20.5	120.7	47.4	*	42.0
Total operational systems development ^c	1,750.0	756.1	939.0	0.0	10.7	1.3	37.5	2.8	0.0	2.7
Department of the Navy										
RDT&E	18,575.6	7,331.6	9,649.9	66.2	1,028.6	50.6	250.8	138.2	1.1	58.7
Total research	1,590.7	537.6	302.3	6.3	604.7	1.7	95.6	9.6	0.6	32.1
Basic research	655.7	182.9	22.1	0.1	391.7	0.3	34.9	0.9	0.6	22.2
Applied research	935.0	354.7	280.2	6.2	213.0	1.4	60.7	8.8	0.0	9.9
Total experimental development ^b	13,750.5	5,529.0	7,558.8	28.2	347.6	41.5	128.5	93.0	0.4	23.6
Advanced technology	1,008.2	415.5	417.8	0.9	68.8	0.2	97.3	6.5	0.3	0.8
Major systems	12,742.4	5,113.4	7,141.0	27.3	278.8	41.3	31.2	86.4	0.1	22.7
Total operational systems development ^c	3,234.4	1,265.0	1,788.8	31.8	76.2	7.4	26.6	35.6	0.0	3.0
Other defense agencies										
RDT&E	19,856.3	10,201.9	7,776.0	196.9	702.2	241.7	167.1	262.7	19.3	288.5
Total research	871.3	366.3	189.1	27.1	175.4	55.8	33.0	22.5	0.0	2.3
Basic research	322.1	114.7	41.0	5.0	140.5	2.6	14.6	2.1	0.0	1.6
Applied research	549.2	251.6	148.0	22.1	34.9	53.2	18.4	20.4	0.0	0.7
Total experimental development ^b	13,894.4	5,381.4	7,024.1	168.8	509.4	185.9	129.8	225.7	19.3	250.0

TABLE 9

Department of Defense obligations for research, development, test, and evaluation, by agency and performer: FY 2019

(Dollars in millions)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Advanced technology	2,029.7	967.3	672.3	49.0	131.6	48.7	73.4	32.8	1.8	53.0
Major systems	11,864.7	4,414.2	6,351.7	119.9	377.8	137.3	56.4	192.9	17.4	197.1
Total operational systems development ^c	5,090.5	4,454.1	562.9	1.0	17.5	0.0	4.4	14.5	0.0	36.1

* = amount greater than \$0 but less than \$50,000.

FFRDC = federally funded research and development center; RDT&E = research, development, test, and evaluation.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.^b Department of Defense (DOD) development obligations have been reported in two categories, advanced technology and major systems, since volume 44 (FYs 1994–96). As of volume 66 (FYs 2016–17), the definition of major systems development was changed to represent DOD Budget Activities 4 through 6 instead of Budget Activities 4 through 7.^c Funding for DOD's Operational Systems Development (Budget Activity 7) was first reported as a separate category for volume 66.**Note(s):**Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.**Source(s):**

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 10

Preliminary Department of Defense obligations for research, development, test, and evaluation, by agency and performer: FY 2020

(Dollars in millions)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Department of Defense										
RDT&E	99,764.3	30,038.7	62,678.7	550.6	3,433.2	480.2	1,103.8	840.3	12.5	626.3
Total research	8,464.9	2,584.9	2,957.6	67.8	2,214.0	93.1	353.4	75.3	4.0	114.9
Basic research	2,564.7	575.5	380.8	14.1	1,381.2	7.9	95.3	27.4	2.7	79.8
Applied research	5,900.2	2,009.4	2,576.8	53.7	832.8	85.1	258.0	47.9	1.3	35.2
Total experimental development ^b	53,996.4	19,241.5	31,235.7	336.5	1,106.4	352.7	657.1	613.0	8.0	445.5
Advanced technology	7,301.8	2,746.7	3,543.5	71.4	314.7	79.0	446.0	50.1	1.0	49.5
Major systems	46,694.6	16,494.8	27,692.2	265.1	791.7	273.8	211.1	562.9	7.0	396.0
Total operational systems development ^c	37,303.0	8,212.3	28,485.4	146.3	112.8	34.4	93.4	152.1	0.5	65.8
Defense Advanced Research Projects Agency										
RDT&E	3,667.2	395.5	2,268.5	42.7	667.7	62.3	145.7	31.0	0.8	53.1
Total research	1,994.8	94.3	1,027.4	28.7	621.2	30.7	128.9	22.8	0.8	40.1
Basic research	481.6	15.0	139.3	8.8	244.4	6.0	41.4	7.8	0.0	18.9
Applied research	1,513.2	79.3	888.0	19.9	376.8	24.7	87.5	15.0	0.8	21.1
Total experimental development ^b	1,672.4	301.2	1,241.1	14.0	46.5	31.6	16.8	8.2	0.0	13.0
Advanced technology	1,536.9	219.9	1,186.9	14.0	46.5	31.6	16.8	8.2	0.0	13.0
Major systems	135.5	81.3	54.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total operational systems development ^c	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Air Force										
RDT&E	42,703.4	6,210.5	35,083.2	183.1	540.3	80.4	71.1	356.3	7.2	171.4
Total research	2,164.8	957.4	686.2	2.4	444.5	2.3	35.2	6.0	0.5	30.3
Basic research	503.4	88.3	54.6	0.1	326.7	0.2	3.1	1.0	0.0	29.5
Applied research	1,661.3	869.1	631.6	2.2	117.8	2.2	32.1	5.0	0.5	0.9
Total experimental development ^b	13,457.0	3,632.9	9,202.0	122.7	77.4	48.3	15.5	232.0	6.2	120.0
Advanced technology	942.3	410.1	498.5	0.7	17.1	0.2	7.0	8.6	0.1	0.0

TABLE 10

Preliminary Department of Defense obligations for research, development, test, and evaluation, by agency and performer: FY 2020

(Dollars in millions)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Major systems	12,514.7	3,222.8	8,703.5	121.9	60.3	48.1	8.6	223.4	6.1	120.0
Total operational systems development ^c	27,081.6	1,620.1	25,195.0	58.1	18.4	29.7	20.4	118.3	0.5	21.1
Department of the Army										
RDT&E	12,559.2	4,840.4	6,729.0	9.8	523.6	28.8	294.9	70.0	2.1	60.4
Total research	1,812.8	650.9	693.7	0.5	364.7	2.4	73.5	14.0	2.1	10.8
Basic research	550.9	177.3	73.1	0.0	265.0	0.2	13.5	10.9	2.1	8.8
Applied research	1,262.0	473.6	620.6	0.5	99.7	2.2	60.0	3.2	0.0	2.0
Total experimental development ^b	8,941.9	3,409.8	5,067.2	9.3	147.9	25.1	182.7	53.1	*	46.9
Advanced technology	1,498.1	629.1	742.2	*	63.2	4.0	51.3	2.2	0.0	6.1
Major systems	7,443.8	2,780.8	4,324.9	9.3	84.7	21.0	131.4	50.9	*	40.8
Total operational systems development ^c	1,804.4	779.6	968.2	0.0	11.1	1.3	38.7	2.9	0.0	2.7
Department of the Navy										
RDT&E	19,950.7	8,049.0	10,235.7	163.4	1,040.8	48.4	256.6	101.0	1.0	54.7
Total research	1,546.8	523.6	294.9	6.5	587.6	1.7	92.9	9.0	0.6	30.0
Basic research	637.1	177.7	21.4	0.1	380.6	0.3	33.9	0.9	0.6	21.5
Applied research	909.7	345.9	273.5	6.4	207.0	1.3	59.0	8.1	0.0	8.5
Total experimental development ^b	15,240.2	6,189.6	8,303.0	83.4	389.3	43.4	133.5	75.7	0.4	21.7
Advanced technology	982.0	404.3	407.7	1.1	66.8	0.2	94.6	6.1	0.3	0.8
Major systems	14,258.2	5,785.3	7,895.3	82.4	322.5	43.2	39.0	69.6	0.1	20.8
Total operational systems development ^c	3,163.6	1,335.9	1,637.7	73.5	63.8	3.3	30.1	16.3	0.0	3.0
Other defense agencies										
RDT&E	20,883.9	10,543.4	8,362.3	151.6	660.8	260.2	335.6	282.1	1.3	286.6
Total research	945.8	358.7	255.4	29.7	196.0	55.9	22.8	23.5	0.0	3.7
Basic research	391.8	117.2	92.4	5.1	164.6	1.2	3.4	6.9	0.0	1.1
Applied research	554.0	241.5	163.0	24.6	31.4	54.7	19.5	16.6	0.0	2.6
Total experimental development ^b	14,684.8	5,707.9	7,422.4	107.1	445.3	204.3	308.6	244.0	1.3	243.9

TABLE 10

Preliminary Department of Defense obligations for research, development, test, and evaluation, by agency and performer: FY 2020

(Dollars in millions)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Advanced technology	2,342.5	1,083.3	708.1	55.5	121.1	42.9	276.4	25.1	0.5	29.6
Major systems	12,342.3	4,624.7	6,714.2	51.6	324.2	161.4	32.2	218.9	0.8	214.3
Total operational systems development ^c	5,253.3	4,476.7	684.5	14.8	19.5	0.0	4.2	14.6	0.0	38.9

* = amount greater than \$0 but less than \$50,000.

FFRDC = federally funded research and development center; RDT&E = research, development, test, and evaluation.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.^b Department of Defense (DOD) development obligations have been reported in two categories, advanced technology and major systems, since volume 44 (FYs 1994–96). As of volume 66 (FYs 2016–17), the definition of major systems development was changed to represent DOD Budget Activities 4 through 6 instead of Budget Activities 4 through 7.^c Funding for DOD's Operational Systems Development (Budget Activity 7) was first reported as a separate category for volume 66.**Note(s):**Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.**Source(s):**

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 11

Federal obligations for research and experimental development and for R&D plant to federally funded research and development centers, by agency: FY 2019

(Dollars in thousands)

Agency	R&D				R&D plant			
	Total	Industry-administered FFRDCs	University-administered FFRDCs	Nonprofit-administered FFRDCs	Total	Industry-administered FFRDCs	University-administered FFRDCs	Nonprofit-administered FFRDCs
All agencies	14,691,030.2	6,077,581.3	5,351,919.6	3,261,529.2	2,234,544.6	428,268.6	850,027.0	956,249.0
Departments								
Department of Commerce	29,428.3	0.0	9,928.6	19,499.7	0.0	0.0	0.0	0.0
National Institute of Standards and Technology	19,202.9	0.0	0.0	19,202.9	0.0	0.0	0.0	0.0
National Oceanic and Atmospheric Administration	10,225.4	0.0	9,928.6	296.8	0.0	0.0	0.0	0.0
Department of Defense	1,551,156.2	379,985.2	450,700.5	720,470.5	80,391.3	77,223.3	2,968.0	200.0
Defense Advanced Research Projects Agency	121,677.7	38,239.6	55,657.8	27,780.3	0.0	0.0	0.0	0.0
Department of the Air Force	464,748.0	103,650.4	82,380.3	278,717.2	0.0	0.0	0.0	0.0
Department of the Army	98,612.0	7,680.9	27,695.9	63,235.1	0.0	0.0	0.0	0.0
Department of the Navy	180,302.6	34,478.1	43,244.7	102,579.8	6,168.0	3,000.0	2,968.0	200.0
Other defense agencies	685,816.0	195,936.1	241,721.8	248,158.1	74,223.3	74,223.3	0.0	0.0
Department of Energy	9,632,400.0	5,170,580.3	2,240,021.1	2,221,798.7	2,144,453.3	351,045.3	837,359.0	956,049.0
Advanced Research Projects Agency—Energy	56,659.1	21,165.6	10,748.8	24,744.7	0.0	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	99,127.7	32,119.8	13,796.5	53,211.5	0.0	0.0	0.0	0.0
Energy Efficiency and Renewable Energy	875,322.2	127,590.3	179,732.5	567,999.4	305,460.0	0.0	0.0	305,460.0
Environmental Management	5,455.0	5,230.0	225.0	0.0	0.0	0.0	0.0	0.0
Fossil Energy	25,000.0	13,000.0	10,000.0	2,000.0	0.0	0.0	0.0	0.0
National Nuclear Security Administration	4,527,266.7	4,442,223.2	16,931.0	68,112.5	337,342.0	337,342.0	0.0	0.0
Defense Programs	2,489,717.7	2,483,096.0	950.0	5,671.7	337,342.0	337,342.0	0.0	0.0
Naval Nuclear Propulsion Program	1,788,618.0	1,788,618.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	248,931.0	170,509.2	15,981.0	62,440.8	0.0	0.0	0.0	0.0
Nuclear Energy	439,148.6	294,282.1	30,135.7	114,730.9	0.0	0.0	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	18,146.9	11,287.7	0.0	6,859.2	0.0	0.0	0.0	0.0
Office of Science	3,586,273.9	223,681.6	1,978,451.6	1,384,140.6	1,501,651.3	13,703.3	837,359.0	650,589.0

TABLE 11

Federal obligations for research and experimental development and for R&D plant to federally funded research and development centers, by agency: FY 2019

(Dollars in thousands)

Agency	R&D				R&D plant			
	Total	Industry-administered FFRDCs	University-administered FFRDCs	Nonprofit-administered FFRDCs	Total	Industry-administered FFRDCs	University-administered FFRDCs	Nonprofit-administered FFRDCs
Department of Health and Human Services	548,509.3	495,720.0	20,551.4	32,237.8	0.0	0.0	0.0	0.0
Centers for Disease Control and Prevention	340.8	0.0	0.0	340.8	0.0	0.0	0.0	0.0
Centers for Medicare and Medicaid Services	*	0.0	0.0	*	0.0	0.0	0.0	0.0
National Institutes of Health	548,168.5	495,720.0	20,551.4	31,897.0	0.0	0.0	0.0	0.0
Department of Homeland Security	69,443.0	13,427.5	6,321.3	49,694.2	0.0	0.0	0.0	0.0
Countering Weapons of Mass Destruction Office	23,580.9	10,778.0	4,823.2	7,979.7	0.0	0.0	0.0	0.0
Cybersecurity and Infrastructure Security Agency	7,530.9	2,649.6	333.3	4,548.0	0.0	0.0	0.0	0.0
Science and Technology Directorate	37,611.2	0.0	914.7	36,696.5	0.0	0.0	0.0	0.0
U.S. Coast Guard	470.0	0.0	0.0	470.0	0.0	0.0	0.0	0.0
U.S. Secret Service	250.0	0.0	250.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	619.0	0.0	320.0	299.0	0.0	0.0	0.0	0.0
Bureau of Reclamation	619.0	0.0	320.0	299.0	0.0	0.0	0.0	0.0
Department of Transportation	81,811.7	0.0	265.0	81,546.7	0.0	0.0	0.0	0.0
Federal Aviation Administration	79,284.6	0.0	0.0	79,284.6	0.0	0.0	0.0	0.0
Federal Highway Administration	500.0	0.0	0.0	500.0	0.0	0.0	0.0	0.0
National Highway Traffic Safety Administration	1,314.2	0.0	265.0	1,049.2	0.0	0.0	0.0	0.0
Pipeline and Hazardous Materials Safety Administration	713.0	0.0	0.0	713.0	0.0	0.0	0.0	0.0
Department of Veterans Affairs	71,051.9	0.0	0.0	71,051.9	0.0	0.0	0.0	0.0
Other agencies								
Administrative Office of the U.S. Courts	6,448.3	0.0	0.0	6,448.3	0.0	0.0	0.0	0.0
Environmental Protection Agency	1,366.1	472.3	679.1	214.7	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	2,358,911.8	4,989.8	2,315,936.7	37,985.2	9,700.0	0.0	9,700.0	0.0
National Science Foundation	308,907.7	0.0	303,201.7	5,706.0	0.0	0.0	0.0	0.0

TABLE 11
Federal obligations for research and experimental development and for R&D plant to federally funded research and development centers, by agency: FY 2019

(Dollars in thousands)

Agency	R&D				R&D plant			
	Total	Industry-administered FFRDCs	University-administered FFRDCs	Nonprofit-administered FFRDCs	Total	Industry-administered FFRDCs	University-administered FFRDCs	Nonprofit-administered FFRDCs
Nuclear Regulatory Commission	30,977.0	12,406.3	3,994.3	14,576.5	0.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50.

FFRDC = federally funded research and development center.

Note(s):
Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):
National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 12

Preliminary federal obligations for research and experimental development and for R&D plant to federally funded research and development centers, by agency: FY 2020

(Dollars in thousands)

Agency	R&D				R&D plant			
	Total	Industry-administered FFRDCs	University-administered FFRDCs	Nonprofit-administered FFRDCs	Total	Industry-administered FFRDCs	University-administered FFRDCs	Nonprofit-administered FFRDCs
All agencies	15,354,113.1	6,483,760.0	5,240,673.0	3,629,680.0	2,225,966.1	350,325.0	799,308.1	1,076,333.0
Departments								
Department of Commerce	25,056.7	293.1	5,189.5	19,574.1	0.0	0.0	0.0	0.0
National Institute of Standards and Technology	19,574.1	0.0	0.0	19,574.1	0.0	0.0	0.0	0.0
National Oceanic and Atmospheric Administration	5,482.6	293.1	5,189.5	0.0	0.0	0.0	0.0	0.0
Department of Defense	1,538,344.7	404,276.2	445,800.9	688,267.6	4,808.0	3,833.0	775.0	200.0
Defense Advanced Research Projects Agency	136,001.7	42,711.6	62,327.5	30,962.6	0.0	0.0	0.0	0.0
Department of the Air Force	413,603.2	125,038.0	50,621.8	237,943.5	0.0	0.0	0.0	0.0
Department of the Army	104,497.1	9,800.3	27,521.7	67,175.0	0.0	0.0	0.0	0.0
Department of the Navy	219,765.7	89,942.3	45,107.3	84,716.1	4,808.0	3,833.0	775.0	200.0
Other defense agencies	664,477.0	136,784.0	260,222.6	267,470.3	0.0	0.0	0.0	0.0
Department of Education	500.0	0.0	0.0	500.0	0.0	0.0	0.0	0.0
Department of Energy	10,511,648.2	5,528,767.1	2,414,042.6	2,568,838.4	2,219,597.0	346,492.0	796,972.0	1,076,133.0
Advanced Research Projects Agency—Energy	59,463.8	22,213.3	11,280.9	25,969.6	0.0	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	110,732.1	35,879.9	15,411.5	59,440.7	0.0	0.0	0.0	0.0
Energy Efficiency and Renewable Energy	1,324,794.8	193,107.1	272,024.0	859,663.7	418,575.0	0.0	0.0	418,575.0
Environmental Management	3,574.9	2,449.9	600.0	525.0	0.0	0.0	0.0	0.0
Fossil Energy	41,000.0	13,000.0	9,000.0	19,000.0	0.0	0.0	0.0	0.0
National Nuclear Security Administration	4,949,466.6	4,860,801.8	14,032.0	74,632.8	281,492.0	281,492.0	0.0	0.0
Defense Programs	3,044,808.8	3,039,500.0	390.0	4,918.8	281,492.0	281,492.0	0.0	0.0
Naval Nuclear Propulsion Program	1,648,396.0	1,648,396.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	256,261.9	172,905.8	13,642.0	69,714.0	0.0	0.0	0.0	0.0
Nuclear Energy	287,758.0	195,941.0	32,368.0	59,449.0	65,000.0	65,000.0	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	11,000.0	6,000.0	5,000.0	0.0	0.0	0.0	0.0	0.0

TABLE 12

Preliminary federal obligations for research and experimental development and for R&D plant to federally funded research and development centers, by agency: FY 2020

(Dollars in thousands)

Agency	R&D				R&D plant			
	Total	Industry-administered FFRDCs	University-administered FFRDCs	Nonprofit-administered FFRDCs	Total	Industry-administered FFRDCs	University-administered FFRDCs	Nonprofit-administered FFRDCs
Office of Science	3,723,858.0	199,374.1	2,054,326.2	1,470,157.7	1,454,530.0	0.0	796,972.0	657,558.0
Department of Health and Human Services	584,632.9	527,855.8	22,812.3	33,964.8	0.0	0.0	0.0	0.0
Centers for Disease Control and Prevention	928.6	0.0	928.6	0.0	0.0	0.0	0.0	0.0
National Institutes of Health	583,704.3	527,855.8	21,883.7	33,964.8	0.0	0.0	0.0	0.0
Department of Homeland Security	43,139.4	8,248.8	7,072.9	27,817.7	0.0	0.0	0.0	0.0
Countering Weapons of Mass Destruction Office	13,441.4	6,954.4	4,822.9	1,664.1	0.0	0.0	0.0	0.0
Cybersecurity and Infrastructure Security Agency	6,448.0	1,294.4	0.0	5,153.6	0.0	0.0	0.0	0.0
Science and Technology Directorate	23,000.0	0.0	2,000.0	21,000.0	0.0	0.0	0.0	0.0
U.S. Secret Service	250.0	0.0	250.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	600.0	0.0	300.0	300.0	0.0	0.0	0.0	0.0
Bureau of Reclamation	600.0	0.0	300.0	300.0	0.0	0.0	0.0	0.0
Department of Transportation	147,605.7	0.0	1,540.3	146,065.4	0.0	0.0	0.0	0.0
Federal Aviation Administration	144,303.2	0.0	0.0	144,303.2	0.0	0.0	0.0	0.0
Federal Highway Administration	1,275.3	0.0	1,275.3	0.0	0.0	0.0	0.0	0.0
National Highway Traffic Safety Administration	1,314.2	0.0	265.0	1,049.2	0.0	0.0	0.0	0.0
Pipeline and Hazardous Materials Safety Administration	713.0	0.0	0.0	713.0	0.0	0.0	0.0	0.0
Department of the Treasury	7,916.0	0.0	0.0	7,916.0	0.0	0.0	0.0	0.0
Bureau of Engraving and Printing	7,916.0	0.0	0.0	7,916.0	0.0	0.0	0.0	0.0
Department of Veterans Affairs	75,101.1	0.0	0.0	75,101.1	0.0	0.0	0.0	0.0
Other agencies								
Administrative Office of the U.S. Courts	7,671.6	0.0	0.0	7,671.6	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	2,070,828.5	4,086.1	2,030,723.4	36,019.0	1,561.1	0.0	1,561.1	0.0
National Science Foundation	316,616.6	0.0	310,768.3	5,848.4	0.0	0.0	0.0	0.0

TABLE 12
Preliminary federal obligations for research and experimental development and for R&D plant to federally funded research and development centers, by agency: FY 2020

(Dollars in thousands)

Agency	R&D				R&D plant			
	Total	Industry-administered FFRDCs	University-administered FFRDCs	Nonprofit-administered FFRDCs	Total	Industry-administered FFRDCs	University-administered FFRDCs	Nonprofit-administered FFRDCs
Nuclear Regulatory Commission	24,451.7	10,233.0	2,422.8	11,796.0	0.0	0.0	0.0	0.0

FFRDC = federally funded research and development center.

Note(s):
Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):
National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 13

Federal obligations for research and experimental development to federally funded research and development centers, by FFRDC and agency: FY 2019

(Dollars in thousands)

FFRDC	Total	DHS	DOC	DOD	DOE	HHS	NASA	NSF	Other ^a
All FFRDCs	14,691,030.2	69,443.0	29,428.3	1,551,156.2	9,632,400.0	548,509.3	2,358,911.8	308,907.7	192,274.0
Administered by industrial firms	6,077,581.3	13,427.5	0.0	379,985.2	5,170,580.3	495,720.0	4,989.8	0.0	12,878.5
Frederick National Laboratory for Cancer Research	492,255.4	0.0	0.0	1,316.4	0.0	490,939.0	0.0	0.0	0.0
Idaho National Laboratory	2,140,631.3	1,532.4	0.0	13,026.7	2,119,704.8	0.0	0.0	0.0	6,367.5
Lawrence Livermore National Laboratory	1,049,427.2	5,929.6	0.0	90,122.4	950,111.5	3,169.2	75.2	0.0	19.3
Los Alamos National Laboratory	845,660.7	1,608.2	0.0	21,286.5	817,851.4	0.0	4,914.6	0.0	0.0
Sandia National Laboratories	1,515,400.6	3,202.1	0.0	247,878.7	1,256,241.2	1,611.8	0.0	0.0	6,466.8
Savannah River National Laboratory	34,206.1	1,155.3	0.0	6,354.4	26,671.4	0.0	0.0	0.0	25.0
Administered by universities and colleges ^b	5,351,919.6	6,321.3	9,928.6	450,700.5	2,240,021.1	20,551.4	2,315,936.7	303,201.7	5,258.3
Ames Laboratory	29,851.2	0.0	0.0	379.6	29,471.6	0.0	0.0	0.0	0.0
Argonne National Laboratory	640,037.0	1,108.3	0.0	2,253.0	632,031.7	0.0	0.0	0.0	4,644.0
Fermi National Accelerator Laboratory	315,886.4	0.0	0.0	0.0	315,886.4	0.0	0.0	0.0	0.0
Jet Propulsion Laboratory	2,315,344.0	914.7	0.0	11,893.8	0.0	0.0	2,302,535.5	0.0	0.0
Lawrence Berkeley National Laboratory	757,025.3	0.0	0.0	1,584.1	734,889.9	20,551.4	0.0	0.0	0.0
Lincoln Laboratory	397,940.7	2,100.8	0.0	395,839.9	0.0	0.0	0.0	0.0	0.0
National Center for Atmospheric Research	176,293.3	0.0	9,928.6	0.0	0.0	0.0	13,401.2	152,349.2	614.4
National Optical Astronomy Observatory	29,159.5	0.0	0.0	0.0	0.0	0.0	0.0	29,159.5	0.0
National Radio Astronomy Observatory	105,300.2	0.0	0.0	0.0	0.0	0.0	0.0	105,300.2	0.0
National Solar Observatory	16,392.8	0.0	0.0	0.0	0.0	0.0	0.0	16,392.8	0.0
Princeton Plasma Physics Laboratory	127,714.1	0.0	0.0	2,206.1	125,508.0	0.0	0.0	0.0	0.0
SLAC National Accelerator Laboratory	274,281.9	1,947.4	0.0	1,616.0	270,718.5	0.0	0.0	0.0	0.0
Software Engineering Institute	35,178.0	250.0	0.0	34,928.0	0.0	0.0	0.0	0.0	0.0
Thomas Jefferson National Accelerator Facility	131,515.1	0.0	0.0	0.0	131,515.1	0.0	0.0	0.0	0.0
Administered by nonprofit institutions ^c	3,261,529.2	49,694.2	19,499.7	720,470.5	2,221,798.7	32,237.8	37,985.2	5,706.0	174,137.1
Aerospace FFRDC	259,675.9	333.3	0.0	229,907.5	0.0	0.0	28,469.1	966.0	0.0
Arroyo Center	21,788.9	0.0	0.0	21,788.9	0.0	0.0	0.0	0.0	0.0
Brookhaven National Laboratory	479,732.3	0.0	0.0	389.0	465,142.1	3,600.0	9,516.1	0.0	1,085.2
Center for Advanced Aviation System Development	96,961.9	0.0	0.0	17,677.3	0.0	0.0	0.0	0.0	79,284.6
Center for Communications and Computing	55,859.9	333.3	450.0	55,076.6	0.0	0.0	0.0	0.0	0.0

TABLE 13

Federal obligations for research and experimental development to federally funded research and development centers, by FFRDC and agency: FY 2019

(Dollars in thousands)

FFRDC	Total	DHS	DOC	DOD	DOE	HHS	NASA	NSF	Other ^a
Center for Enterprise Modernization	138,385.2	0.0	0.0	54,495.8	0.0	12,837.6	0.0	0.0	71,051.9
Center for Naval Analyses	72,034.0	1,213.3	0.0	70,820.7	0.0	0.0	0.0	0.0	0.0
Center for Nuclear Waste Regulatory Analyses	5,300.5	0.0	0.0	4,024.6	0.0	0.0	0.0	0.0	1,275.8
CMS Alliance to Modernize Healthcare	*	0.0	0.0	0.0	0.0	*	0.0	0.0	0.0
Homeland Security Operational Analysis Center	6,252.4	3,517.0	0.0	2,735.4	0.0	0.0	0.0	0.0	0.0
Homeland Security Systems Engineering and Development Institute	21,734.5	21,734.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Judiciary Engineering and Modernization Center	7,478.3	0.0	0.0	1,030.0	0.0	0.0	0.0	0.0	6,448.3
National Biodefense Analysis and Countermeasures Center	17,510.3	17,314.3	0.0	196.0	0.0	0.0	0.0	0.0	0.0
National Cybersecurity Center of Excellence	18,952.9	0.0	18,752.9	200.0	0.0	0.0	0.0	0.0	0.0
National Defense Research Institute	13,406.8	0.0	0.0	13,406.8	0.0	0.0	0.0	0.0	0.0
National Renewable Energy Laboratory	347,383.6	0.0	0.0	3,546.1	343,637.5	0.0	0.0	0.0	200.0
National Security Engineering Center	164,966.8	0.0	0.0	164,966.8	0.0	0.0	0.0	0.0	0.0
Oak Ridge National Laboratory	1,073,088.2	1,912.9	0.0	9,948.6	1,054,455.8	340.8	0.0	0.0	6,430.0
Pacific Northwest National Laboratory	413,897.1	3,335.5	296.8	27,880.6	358,563.3	15,459.5	0.0	0.0	8,361.4
Project Air Force	2,226.0	0.0	0.0	2,226.0	0.0	0.0	0.0	0.0	0.0
Science and Technology Policy Institute	7,222.9	0.0	0.0	2,482.9	0.0	0.0	0.0	4,740.0	0.0
Systems and Analyses Center	37,670.8	0.0	0.0	37,670.8	0.0	0.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50.

DHS = Department of Homeland Security; DOC = Department of Commerce; DOD = Department of Defense; DOE = Department of Energy; FFRDC = federally funded research and development center; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NSF = National Science Foundation.

^a Includes data for the Departments of the Interior, Transportation, and the Veterans Affairs; the Administrative Office of the U.S. Courts; the Environmental Protection Agency; and the Nuclear Regulatory Commission.

^b Includes university consortia.

^c Other than universities and colleges.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 14

Federal obligations for R&D plant to federally funded research and development centers, by FFRDC and agency: FY 2019

(Dollars in thousands)

FFRDC	Total	DOD	DOE	NASA
All FFRDCs	2,234,544.6	80,391.3	2,144,453.3	9,700.0
Administered by industrial firms	428,268.6	77,223.3	351,045.3	0.0
Idaho National Laboratory	2,990.0	2,590.0	400.0	0.0
Lawrence Livermore National Laboratory	178,303.3	6,212.8	172,090.6	0.0
Los Alamos National Laboratory	130,811.4	410.0	130,401.4	0.0
Sandia National Laboratories	116,163.9	68,010.6	48,153.3	0.0
Administered by universities and colleges ^a	850,027.0	2,968.0	837,359.0	9,700.0
Ames Laboratory	1,000.0	0.0	1,000.0	0.0
Argonne National Laboratory	184,669.3	0.0	184,669.3	0.0
Fermi National Accelerator Laboratory	260,202.3	0.0	260,202.3	0.0
Jet Propulsion Laboratory	9,700.0	0.0	0.0	9,700.0
Lawrence Berkeley National Laboratory	127,703.7	0.0	127,703.7	0.0
Lincoln Laboratory	700.0	700.0	0.0	0.0
Princeton Plasma Physics Laboratory	11,526.0	0.0	11,526.0	0.0
SLAC National Accelerator Laboratory	244,678.9	0.0	244,678.9	0.0
Software Engineering Institute	2,268.0	2,268.0	0.0	0.0
Thomas Jefferson National Accelerator Facility	7,578.9	0.0	7,578.9	0.0
Administered by nonprofit institutions ^b	956,249.0	200.0	956,049.0	0.0
Brookhaven National Laboratory	103,792.5	0.0	103,792.5	0.0
Center for Communications and Computing	200.0	200.0	0.0	0.0
National Renewable Energy Laboratory	305,460.0	0.0	305,460.0	0.0
Oak Ridge National Laboratory	496,128.3	0.0	496,128.3	0.0
Pacific Northwest National Laboratory	50,668.2	0.0	50,668.2	0.0

DOD = Department of Defense; DOE = Department of Energy; FFRDC = federally funded research and development center; NASA = National Aeronautics and Space Administration.

^a Includes university consortia.

^b Other than universities and colleges.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 15

Federal obligations for research, by agency and performer: FY 2019

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
All agencies	81,117,784.1	18,298,241.0	10,738,893.3	3,666,668.4	32,381,032.0	4,882,436.5	7,891,516.5	2,270,909.1	500,400.0	487,687.4
Departments										
Department of Agriculture	2,406,970.5	1,434,223.2	32,004.5	0.0	892,674.3	0.0	38,240.7	0.0	7,043.2	2,784.6
Agricultural Marketing Service	3,855.3	3,855.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agricultural Research Service	1,163,136.8	1,032,676.1	0.0	0.0	114,586.6	0.0	12,875.3	0.0	313.6	2,685.1
Animal and Plant Health Inspection Service	18,812.2	13,585.9	0.0	0.0	5,226.3	0.0	0.0	0.0	0.0	0.0
Economic Research Service	85,626.4	73,922.6	5,724.1	0.0	3,680.9	0.0	2,236.5	0.0	8.8	53.5
Forest Service	254,990.0	227,815.6	416.3	0.0	17,757.8	0.0	2,496.5	0.0	6,457.8	46.0
National Agricultural Statistics Service	5,263.0	4,775.7	0.0	0.0	253.4	0.0	233.9	0.0	0.0	0.0
National Institute of Food and Agriculture	871,374.4	77,592.1	25,864.0	0.0	750,056.7	0.0	17,598.5	0.0	263.0	0.0
Rural Business-Cooperative Service	3,912.5	0.0	0.0	0.0	1,112.5	0.0	2,800.0	0.0	0.0	0.0
Department of Commerce	1,281,939.4	939,251.3	38,430.4	0.0	255,321.9	2,495.2	23,892.1	19,202.9	1,955.9	1,389.8
National Institute of Standards and Technology	702,966.5	598,180.7	34,997.6	0.0	45,777.8	0.0	3,313.8	19,202.9	108.0	1,385.8
National Oceanic and Atmospheric Administration	541,827.6	303,925.4	3,432.8	0.0	209,544.1	2,495.2	20,578.3	0.0	1,847.9	4.0
National Telecommunications and Information Administration	7,900.0	7,900.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Census Bureau	29,245.2	29,245.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Defense	8,268,405.3	2,604,468.4	2,804,415.6	61,568.8	2,161,454.0	89,087.5	357,760.8	71,550.5	3,643.8	114,455.8
Defense Advanced Research Projects Agency	1,743,305.0	81,179.1	880,740.7	25,347.1	557,742.7	26,603.9	114,276.2	20,288.0	650.0	36,477.4
Department of the Air Force	2,106,887.0	911,648.6	647,916.2	2,224.5	470,109.0	2,208.4	33,252.8	5,727.7	465.0	33,335.0
Department of the Army	1,956,186.3	707,745.4	784,403.8	601.9	353,464.6	2,773.3	81,648.8	13,440.2	1,900.0	10,208.3
Department of the Navy	1,590,684.9	537,611.2	302,299.1	6,308.7	604,724.2	1,714.6	95,629.9	9,625.7	628.9	32,142.5
Other defense agencies	871,342.1	366,284.0	189,055.8	27,086.7	175,413.5	55,787.4	32,953.1	22,469.0	0.0	2,292.6
Department of Education	188,656.1	8,488.8	4,196.1	0.0	126,317.3	0.0	48,279.3	0.0	1,374.5	0.0

TABLE 15

Federal obligations for research, by agency and performer: FY 2019

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Department of Energy	11,369,719.3	975,119.8	1,793,440.5	3,086,100.0	1,248,555.3	2,172,525.4	78,315.0	2,001,877.9	12,131.0	1,654.5
Advanced Research Projects Agency—Energy	202,477.3	0.0	85,594.9	10,582.8	81,578.5	5,374.4	6,974.3	12,372.3	0.0	0.0
Electricity Delivery and Energy Reliability	86,994.0	1,988.7	5,732.9	20,285.6	10,317.5	8,713.3	6,080.9	33,606.4	268.6	0.0
Energy Efficiency and Renewable Energy	1,270,334.0	0.0	296,261.5	95,576.8	307,763.4	134,636.1	0.0	425,483.8	10,612.4	0.0
Environmental Management	8,622.8	0.0	2,178.2	1,725.9	4,644.5	74.2	0.0	0.0	0.0	0.0
Fossil Energy	659,000.0	601,000.0	0.0	13,000.0	33,000.0	10,000.0	0.0	2,000.0	0.0	0.0
National Nuclear Security Administration	3,670,121.2	98,430.8	905,055.5	2,535,597.7	14,726.4	14,751.0	45,969.3	55,540.5	50.0	0.0
Defense Programs	3,434,107.1	98,430.8	889,424.3	2,394,696.0	975.0	950.0	45,969.3	3,661.7	0.0	0.0
Office of Defense Nuclear Nonproliferation	236,014.1	0.0	15,631.3	140,901.7	13,751.4	13,801.0	0.0	51,878.7	50.0	0.0
Nuclear Energy	378,272.7	1,158.8	78,666.7	174,361.7	21,267.3	20,524.6	0.0	81,875.3	0.0	418.3
Office of Cybersecurity, Energy Security, and Emergency Response	40,022.2	29.1	18,346.2	11,287.7	3,500.0	0.0	0.0	6,859.2	0.0	0.0
Office of Science	5,053,875.1	272,512.3	401,604.5	223,681.6	771,757.8	1,978,451.6	19,290.4	1,384,140.6	1,200.0	1,236.2
Department of Health and Human Services	38,354,401.0	7,718,426.8	2,060,176.1	495,720.0	21,489,376.5	20,551.4	6,001,270.6	32,237.8	271,650.0	264,991.6
Administration for Children and Families	2,254.8	205.0	0.0	0.0	0.0	0.0	2,049.8	0.0	0.0	0.0
Administration for Community Living	65,922.4	0.0	200.0	0.0	53,478.7	0.0	11,935.6	0.0	308.1	0.0
Agency for Healthcare Research and Quality	308,145.0	46,928.1	130,303.0	0.0	100,708.7	0.0	30,110.2	0.0	95.0	0.0
Agency for Toxic Substances and Disease Registry	7,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7,000.0	0.0
Centers for Disease Control and Prevention	365,866.5	135,441.6	25,857.1	0.0	122,643.2	0.0	33,286.6	340.8	27,284.9	21,012.3
Centers for Medicare and Medicaid Services	133,488.6	0.0	0.0	0.0	11,554.7	0.0	0.0	*	121,933.9	0.0

Federal obligations for research, by agency and performer: FY 2019

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Food and Drug Administration	493,052.5	360,481.0	11,457.7	0.0	72,300.0	0.0	39,658.4	0.0	2,103.5	7,052.0
Health Resources and Services Administration	32,625.8	4,224.1	0.0	0.0	24,027.6	0.0	4,374.1	0.0	0.0	0.0
National Institutes of Health	36,929,000.0	7,168,394.8	1,886,812.7	495,720.0	21,102,517.9	20,551.4	5,873,254.0	31,897.0	112,924.6	236,927.4
Office of the Secretary of Health and Human Services	17,045.5	2,752.2	5,545.7	0.0	2,145.7	0.0	6,601.9	0.0	0.0	0.0
Office of the Assistant Secretary for Planning and Evaluation	17,045.5	2,752.2	5,545.7	0.0	2,145.7	0.0	6,601.9	0.0	0.0	0.0
Department of Homeland Security	279,526.8	84,374.2	141,341.3	6,053.7	21,998.4	4,381.6	2,182.7	16,663.1	0.0	2,531.9
Countering Weapons of Mass Destruction Office	31,194.2	1,776.8	11,717.6	3,404.1	5,602.7	4,048.2	0.0	4,345.8	0.0	299.0
Cybersecurity and Infrastructure Security Agency	13,126.0	1,683.6	1,857.8	2,649.6	1,173.8	333.3	880.0	4,548.0	0.0	0.0
Science and Technology Directorate	229,351.6	77,338.3	126,059.7	0.0	15,118.8	0.0	1,302.7	7,299.3	0.0	2,232.9
U.S. Coast Guard	5,855.0	3,575.5	1,706.3	0.0	103.2	0.0	0.0	470.0	0.0	0.0
Department of Housing and Urban Development	60,997.5	42,893.8	11,374.8	0.0	1,646.9	0.0	5,082.1	0.0	0.0	0.0
Department of the Interior	689,750.1	583,976.1	16,867.7	0.0	51,430.4	320.0	1,661.0	200.0	32,504.0	2,790.8
Bureau of Indian Affairs	5,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,000.0	0.0
Bureau of Land Management	13,724.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13,724.0	0.0
Bureau of Ocean Energy Management	65,080.0	43,853.5	11,330.7	0.0	6,824.4	0.0	234.9	0.0	111.8	2,724.8
Bureau of Reclamation	16,514.0	13,710.0	1,500.0	0.0	784.0	320.0	0.0	200.0	0.0	0.0
Bureau of Safety and Environmental Enforcement	7,547.9	2,235.2	3,722.5	0.0	747.4	0.0	168.0	0.0	608.7	66.0
National Park Service	10,129.7	0.0	26.9	0.0	10,005.8	0.0	96.9	0.0	0.0	0.0
Office of Surface Mining Reclamation and Enforcement	327.5	327.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 15

Federal obligations for research, by agency and performer: FY 2019

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
U.S. Fish and Wildlife Service	32,650.0	32,650.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Geological Survey	538,777.0	491,199.9	287.6	0.0	33,068.9	0.0	1,161.1	0.0	13,059.5	0.0
Department of Justice	105,396.4	4,151.3	17,642.8	0.0	48,051.2	0.0	34,627.2	0.0	923.9	0.0
Bureau of Prisons	1,249.0	957.0	0.0	0.0	0.0	0.0	0.0	0.0	292.0	0.0
Federal Bureau of Investigation	998.4	0.0	998.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Justice Programs	103,149.0	3,194.3	16,644.3	0.0	48,051.2	0.0	34,627.2	0.0	631.9	0.0
Department of Labor	4,366.1	3,309.5	1,056.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Employee Benefits Security Administration	2,642.1	1,585.5	1,056.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Occupational Safety and Health Administration	1,724.0	1,724.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of State	62,200.0	62,200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Transportation	745,596.2	146,191.9	249,740.2	0.0	145,378.3	265.0	47,791.6	4,121.9	151,672.6	434.7
Federal Aviation Administration	193,114.6	66,032.6	78,966.2	0.0	27,781.7	0.0	18,474.3	1,859.8	0.0	0.0
Federal Highway Administration	414,879.6	53,095.2	92,951.0	0.0	92,638.1	0.0	24,022.7	500.0	151,672.6	0.0
Federal Motor Carrier Safety Administration	7,766.4	5,600.7	1,271.0	0.0	729.7	0.0	165.0	0.0	0.0	0.0
Federal Railroad Administration	31,936.1	4,094.4	20,556.8	0.0	4,470.6	0.0	2,379.6	0.0	0.0	434.7
Federal Transit Administration	2,750.0	0.0	0.0	0.0	0.0	0.0	2,750.0	0.0	0.0	0.0
National Highway Traffic Safety Administration	76,323.0	9,258.2	51,511.8	0.0	14,238.9	265.0	0.0	1,049.2	0.0	0.0
Office of the Secretary of Transportation	8,210.9	3,210.9	0.0	0.0	5,000.0	0.0	0.0	0.0	0.0	0.0
Pipeline and Hazardous Materials Safety Administration	10,615.6	4,899.8	4,483.5	0.0	519.3	0.0	0.0	713.0	0.0	0.0
Department of the Treasury	46,177.7	177.7	46,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bureau of Engraving and Printing	46,000.0	0.0	46,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 15

Federal obligations for research, by agency and performer: FY 2019

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
U.S. Mint	177.7	177.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Veterans Affairs	1,477,605.7	1,406,553.8	0.0	0.0	0.0	0.0	0.0	71,051.9	0.0	0.0
Other agencies										
Administrative Office of the U.S. Courts	6,448.3	0.0	0.0	0.0	0.0	0.0	0.0	6,448.3	0.0	0.0
Agency for International Development	171,713.9	16,127.0	12,564.1	0.0	51,524.7	0.0	44,991.3	0.0	0.0	46,506.8
Appalachian Regional Commission	898.9	0.0	254.7	0.0	500.0	0.0	144.2	0.0	0.0	0.0
Consumer Product Safety Commission	856.3	856.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Environmental Protection Agency	404,784.0	208,000.8	143,585.1	472.3	51,832.0	679.1	0.0	214.7	0.0	0.0
Federal Communications Commission	2,005.3	2,005.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Federal Trade Commission	6,003.2	6,003.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Library of Congress	867.6	867.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	8,111,494.3	1,655,905.9	2,874,751.1	4,347.4	904,273.8	2,284,935.2	334,961.6	27,057.5	3,690.8	21,571.1
National Archives and Records Administration	511.0	391.2	0.0	0.0	119.8	0.0	0.0	0.0	0.0	0.0
National Science Foundation	5,996,140.0	36,661.5	403,249.5	0.0	4,918,720.1	303,201.7	289,762.0	5,706.0	13,787.4	25,051.8
Nuclear Regulatory Commission	74,856.6	30,267.8	8,819.9	12,406.3	590.0	3,994.3	772.9	14,576.5	0.0	3,429.0
Patient-Centered Outcomes Research Trust Fund	578,430.5	0.0	0.0	0.0	0.0	0.0	578,430.5	0.0	0.0	0.0
Smithsonian Institution	236,440.0	236,440.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Social Security Administration	146,241.0	90,908.0	42,597.0	0.0	9,267.0	0.0	3,351.0	0.0	23.0	95.0
Tennessee Valley Authority	5,614.0	0.0	5,614.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Agency for Global Media	6,107.0	0.0	6,107.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Postal Service	26,664.2	0.0	24,664.2	0.0	2,000.0	0.0	0.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50.

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.

Note(s):
Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):
National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 16

Preliminary federal obligations for research, by agency and performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
All agencies	85,262,440.2	19,465,238.9	10,832,746.6	4,214,497.6	34,389,565.4	4,729,951.9	8,177,829.8	2,436,187.5	503,655.8	512,766.8
Departments										
Department of Agriculture	2,689,286.2	1,594,871.3	36,985.5	0.0	1,009,782.4	0.0	38,571.3	0.0	7,015.9	2,059.8
Agricultural Marketing Service	3,476.3	3,476.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agricultural Research Service	1,272,600.0	1,174,754.5	0.0	0.0	85,940.0	0.0	9,656.5	0.0	235.2	2,013.8
Animal and Plant Health Inspection Service	18,856.0	13,555.1	0.0	0.0	5,300.9	0.0	0.0	0.0	0.0	0.0
Economic Research Service	85,257.0	73,633.0	5,700.0	0.0	3,680.0	0.0	2,235.0	0.0	9.0	0.0
Foreign Agricultural Service	500.0	0.0	0.0	0.0	500.0	0.0	0.0	0.0	0.0	0.0
Forest Service	259,239.9	232,065.5	416.3	0.0	17,757.8	0.0	2,496.5	0.0	6,457.8	46.0
National Agricultural Statistics Service	5,407.9	4,779.5	0.0	0.0	249.3	0.0	379.2	0.0	0.0	0.0
National Institute of Food and Agriculture	1,040,000.0	92,607.5	30,869.2	0.0	895,205.4	0.0	21,004.1	0.0	313.9	0.0
Rural Business-Cooperative Service	3,949.2	0.0	0.0	0.0	1,149.2	0.0	2,800.0	0.0	0.0	0.0
Department of Commerce	1,370,429.6	978,323.1	60,267.0	0.0	297,028.4	2,500.7	6,341.0	19,574.1	4,366.6	2,028.6
National Institute of Standards and Technology	747,936.6	611,988.1	48,371.3	0.0	58,280.8	0.0	4,884.2	19,574.1	2,819.8	2,018.2
National Oceanic and Atmospheric Administration	575,822.0	319,664.0	11,895.7	0.0	238,747.7	2,500.7	1,456.8	0.0	1,546.7	10.4
National Telecommunications and Information Administration	8,180.0	8,180.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Census Bureau	38,491.0	38,491.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Defense	8,464,939.1	2,584,941.2	2,957,599.6	67,761.8	2,214,005.8	93,085.3	353,369.4	75,253.4	4,004.1	114,918.6
Defense Advanced Research Projects Agency	1,994,780.0	94,293.4	1,027,351.4	28,674.0	621,207.6	30,693.1	128,904.8	22,804.8	777.6	40,073.4
Department of the Air Force	2,164,776.1	957,427.8	686,204.3	2,365.6	444,464.4	2,339.0	35,161.7	5,969.2	499.7	30,344.5
Department of the Army	1,812,810.5	650,934.7	693,715.5	519.7	364,716.4	2,442.6	73,536.2	14,048.4	2,115.8	10,781.2
Department of the Navy	1,546,788.7	523,581.1	294,901.9	6,503.3	587,595.6	1,666.1	92,921.2	8,979.8	611.1	30,028.7
Other defense agencies	945,783.7	358,704.2	255,426.5	29,699.3	196,021.9	55,944.5	22,845.5	23,451.2	0.0	3,690.7

TABLE 16

Preliminary federal obligations for research, by agency and performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Department of Education	191,301.1	8,407.3	5,165.8	0.0	129,944.9	0.0	47,226.2	250.0	306.8	0.0
Department of Energy	12,681,707.7	1,278,278.4	1,807,009.6	3,600,803.7	1,448,088.7	2,283,736.7	64,290.7	2,156,274.3	43,225.6	0.0
Advanced Research Projects Agency—Energy	212,500.0	0.0	89,831.9	11,106.7	85,616.7	5,640.5	7,319.6	12,984.8	0.0	0.0
Electricity Delivery and Energy Reliability	83,285.0	1,903.9	5,488.5	19,420.8	9,877.6	8,341.8	5,821.6	32,173.6	257.2	0.0
Energy Efficiency and Renewable Energy	1,546,376.0	0.0	360,638.8	116,345.6	374,640.0	163,892.4	0.0	517,940.8	12,918.4	0.0
Environmental Management	3,818.1	0.0	1,054.4	808.5	1,584.0	198.0	0.0	173.3	0.0	0.0
Fossil Energy	680,000.0	605,000.0	0.0	13,000.0	34,000.0	9,000.0	0.0	19,000.0	0.0	0.0
National Nuclear Security Administration	4,370,780.6	165,666.0	911,299.0	3,089,620.8	94,110.0	12,076.0	39,670.5	58,288.3	50.0	0.0
Defense Programs	4,131,021.0	155,666.0	905,334.5	2,948,100.0	80,360.0	390.0	39,670.5	1,500.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	239,759.6	10,000.0	5,964.5	141,520.8	13,750.0	11,686.0	0.0	56,788.3	50.0	0.0
Nuclear Energy	435,425.1	925.4	177,034.1	145,127.4	41,520.5	25,261.8	0.0	45,555.8	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	24,603.0	30.0	12,573.0	6,000.0	0.0	5,000.0	1,000.0	0.0	0.0	0.0
Office of Science	5,324,920.0	504,753.0	249,090.0	199,374.1	806,740.0	2,054,326.2	10,479.0	1,470,157.7	30,000.0	0.0
Department of Health and Human Services	40,742,959.7	8,180,759.5	2,163,469.3	527,855.8	22,860,558.7	22,812.3	6,387,771.7	33,964.8	279,366.1	286,401.6
Administration for Children and Families	1,575.0	575.0	0.0	0.0	0.0	0.0	1,000.0	0.0	0.0	0.0
Administration for Community Living	71,822.2	0.0	199.9	0.0	52,282.0	0.0	18,967.8	0.0	372.5	0.0
Agency for Healthcare Research and Quality	308,145.0	48,270.0	131,483.0	0.0	98,720.2	0.0	29,580.0	0.0	91.8	0.0
Agency for Toxic Substances and Disease Registry	7,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7,000.0	0.0
Centers for Disease Control and Prevention	351,895.7	130,483.0	5,655.0	0.0	128,812.6	928.6	33,436.4	0.0	25,544.9	27,035.2

TABLE 16

Preliminary federal obligations for research, by agency and performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Centers for Medicare and Medicaid Services	136,000.0	0.0	0.0	0.0	12,000.0	0.0	0.0	0.0	124,000.0	0.0
Food and Drug Administration	495,000.0	361,904.8	11,502.9	0.0	72,585.6	0.0	39,815.0	0.0	2,111.8	7,079.8
Health Resources and Services Administration	31,521.8	3,655.1	0.0	0.0	23,492.6	0.0	4,374.1	0.0	0.0	0.0
National Institutes of Health	39,323,000.0	7,633,119.4	2,009,128.2	527,855.8	22,470,520.0	21,883.7	6,253,996.5	33,964.8	120,245.1	252,286.6
Office of the Secretary of Health and Human Services	17,000.0	2,752.2	5,500.2	0.0	2,145.7	0.0	6,601.9	0.0	0.0	0.0
Office of the Assistant Secretary for Planning and Evaluation	17,000.0	2,752.2	5,500.2	0.0	2,145.7	0.0	6,601.9	0.0	0.0	0.0
Department of Homeland Security	232,937.5	70,056.5	105,916.6	3,936.8	21,280.0	5,822.9	13,192.5	10,837.8	0.0	1,894.3
Countering Weapons of Mass Destruction Office	24,021.5	2,535.8	6,789.4	2,642.4	4,280.0	4,822.9	372.5	684.2	0.0	1,894.3
Cybersecurity and Infrastructure Security Agency	14,431.0	4,510.9	652.1	1,294.4	0.0	0.0	2,820.0	5,153.6	0.0	0.0
Science and Technology Directorate	193,000.0	62,000.0	98,000.0	0.0	17,000.0	1,000.0	10,000.0	5,000.0	0.0	0.0
U.S. Coast Guard	1,485.0	1,009.8	475.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Housing and Urban Development	88,610.0	40,836.9	29,069.0	0.0	5,145.6	0.0	13,558.5	0.0	0.0	0.0
Department of the Interior	717,934.2	613,645.6	15,220.8	0.0	52,764.6	0.0	2,251.8	0.0	32,268.2	1,783.3
Bureau of Indian Affairs	5,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,000.0	0.0
Bureau of Land Management	13,723.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13,723.0	0.0
Bureau of Ocean Energy Management	67,232.0	51,321.9	8,710.6	0.0	4,940.6	0.0	402.8	0.0	72.7	1,783.3
Bureau of Reclamation	17,500.0	16,000.0	500.0	0.0	1,000.0	0.0	0.0	0.0	0.0	0.0
Bureau of Safety and Environmental Enforcement	13,563.2	4,269.5	5,727.1	0.0	2,933.4	0.0	633.2	0.0	0.0	0.0
National Park Service	10,231.0	0.0	27.2	0.0	10,105.9	0.0	97.9	0.0	0.0	0.0

TABLE 16

Preliminary federal obligations for research, by agency and performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Office of Surface Mining Reclamation and Enforcement	510.0	330.0	0.0	0.0	180.0	0.0	0.0	0.0	0.0	0.0
U.S. Fish and Wildlife Service	32,650.0	32,650.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Geological Survey	557,525.1	509,074.2	255.9	0.0	33,604.7	0.0	1,117.9	0.0	13,472.4	0.0
Department of Justice	90,558.2	4,306.8	8,012.9	0.0	49,012.2	0.0	28,281.7	0.0	944.5	0.0
Bureau of Prisons	1,276.0	976.0	0.0	0.0	0.0	0.0	0.0	0.0	300.0	0.0
Federal Bureau of Investigation	1,003.7	0.0	1,003.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Justice Programs	88,278.5	3,330.8	7,009.2	0.0	49,012.2	0.0	28,281.7	0.0	644.5	0.0
Department of Labor	4,652.0	3,572.0	1,080.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Employee Benefits Security Administration	2,895.3	1,815.3	1,080.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Occupational Safety and Health Administration	1,756.8	1,756.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of State	62,300.0	62,300.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Transportation	913,281.4	208,498.1	367,101.0	0.0	160,200.8	1,540.3	55,072.2	5,294.7	115,574.3	0.0
Federal Aviation Administration	348,223.5	106,835.8	149,993.5	0.0	52,770.4	0.0	35,091.3	3,532.6	0.0	0.0
Federal Highway Administration	391,860.3	65,424.9	131,335.6	0.0	76,361.6	1,275.3	11,888.6	0.0	105,574.3	0.0
Federal Motor Carrier Safety Administration	11,102.4	8,164.1	1,076.8	0.0	1,736.5	0.0	125.0	0.0	0.0	0.0
Federal Railroad Administration	32,243.4	6,771.1	17,411.4	0.0	7,093.5	0.0	967.3	0.0	0.0	0.0
Federal Transit Administration	20,000.0	0.0	0.0	0.0	3,000.0	0.0	7,000.0	0.0	10,000.0	0.0
National Highway Traffic Safety Administration	74,240.7	9,443.4	49,244.3	0.0	14,238.9	265.0	0.0	1,049.2	0.0	0.0
Office of the Secretary of Transportation	15,112.7	10,112.7	0.0	0.0	5,000.0	0.0	0.0	0.0	0.0	0.0
Pipeline and Hazardous Materials Safety Administration	20,498.4	1,746.0	18,039.4	0.0	0.0	0.0	0.0	713.0	0.0	0.0

TABLE 16

Preliminary federal obligations for research, by agency and performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Department of the Treasury	49,604.4	2,575.6	19,512.7	0.0	0.0	0.0	0.0	7,916.0	0.0	19,600.0
Bureau of Engraving and Printing	49,428.7	2,400.0	19,512.7	0.0	0.0	0.0	0.0	7,916.0	0.0	19,600.0
U.S. Mint	175.6	175.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Veterans Affairs	1,570,511.8	1,495,410.7	0.0	0.0	0.0	0.0	0.0	75,101.1	0.0	0.0
Other agencies										
Administrative Office of the U.S. Courts	7,671.6	0.0	0.0	0.0	0.0	0.0	0.0	7,671.6	0.0	0.0
Agency for International Development	171,713.9	16,127.0	12,564.1	0.0	52,524.7	0.0	44,991.3	0.0	0.0	45,506.8
Consumer Product Safety Commission	200.0	200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Environmental Protection Agency	411,906.4	190,545.7	169,718.7	0.0	51,642.0	0.0	0.0	0.0	0.0	0.0
Federal Communications Commission	1,800.0	1,800.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Federal Trade Commission	7,324.8	7,324.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Library of Congress	1,114.3	1,114.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	7,615,288.2	1,748,040.1	2,558,480.1	3,906.5	975,821.5	2,007,262.7	280,975.9	26,405.4	2,427.1	11,968.9
National Science Foundation	6,156,565.0	37,593.9	415,545.0	0.0	5,048,934.4	310,768.3	298,036.5	5,848.4	14,156.7	25,682.0
Nuclear Regulatory Commission	65,286.1	31,281.9	8,000.8	10,233.0	559.6	2,422.8	69.2	11,796.0	0.0	922.9
Patient-Centered Outcomes Research Trust Fund	540,670.0	0.0	0.0	0.0	0.0	0.0	540,670.0	0.0	0.0	0.0
Smithsonian Institution	241,440.0	241,440.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Social Security Administration	131,774.0	62,988.0	55,355.0	0.0	10,271.0	0.0	3,160.0	0.0	0.0	0.0
Tennessee Valley Authority	5,880.0	0.0	5,880.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Agency for Global Media	6,198.0	0.0	6,198.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Postal Service	26,595.0	0.0	24,595.0	0.0	2,000.0	0.0	0.0	0.0	0.0	0.0

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.

Note(s):
Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):
National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 17

Federal obligations for research, by detailed field of science and engineering: FYs 2019–20

(Dollars in thousands)

Field	2019	2020 (preliminary)
All fields	81,117,784.1	85,262,440.2
Computer sciences and mathematics	4,329,973.5	4,740,280.7
Computer sciences	2,896,797.3	NA
Mathematics	1,156,917.0	NA
Other computer sciences and mathematics	276,259.1	NA
Engineering	15,279,311.2	16,417,413.1
Aeronautical engineering	1,199,165.0	NA
Astronautical engineering	829,661.1	NA
Chemical engineering	454,093.1	NA
Civil engineering	566,290.3	NA
Electrical engineering	970,609.7	NA
Mechanical engineering	630,142.5	NA
Metallurgy and materials engineering	1,842,831.3	NA
Other engineering	8,786,518.2	NA
Environmental sciences	5,074,704.0	4,778,290.4
Atmospheric sciences	824,246.9	NA
Geological sciences	239,143.0	NA
Oceanography	819,217.6	NA
Other environmental sciences	3,192,096.6	NA
Life sciences	38,303,662.4	40,665,382.6
Agricultural sciences	1,445,518.9	NA
Biological sciences (excluding environmental biology)	18,910,386.0	NA
Environmental biology	924,187.5	NA
Medical sciences	13,774,777.7	NA
Other life sciences	3,248,792.4	NA
Physical sciences	9,816,132.9	9,607,645.8
Astronomy	1,583,417.8	NA
Chemistry	1,125,457.5	NA
Physics	3,445,977.6	NA
Other physical sciences	3,661,279.9	NA
Psychology	2,753,554.0	2,932,949.8
Biological aspects	17,523.2	NA
Social aspects	52,740.1	NA
Other psychological sciences	2,683,290.7	NA
Social sciences	1,155,672.8	1,018,255.7
Anthropology	34,948.4	NA
Economics	294,908.0	NA
Political science	14,186.3	NA
Sociology	224,016.7	NA
Other social sciences	587,613.4	NA
Other sciences nec	4,404,773.3	5,102,222.1

NA = not available; data were not collected at that level for that fiscal year.

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 18

Federal obligations for research, by agency and field of science and engineering: FY 2019

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
All agencies	81,117,784.1	4,329,973.5	15,279,311.2	5,074,704.0	38,303,662.4	9,816,132.9	2,753,554.0	1,155,672.8	4,404,773.3
Departments									
Department of Agriculture	2,406,970.5	7,933.4	74,549.7	18,163.1	1,997,416.6	93,955.5	0.0	214,952.1	0.0
Agricultural Marketing Service	3,855.3	0.0	0.0	0.0	3,855.3	0.0	0.0	0.0	0.0
Agricultural Research Service	1,163,136.8	1,512.1	10,468.2	5,117.8	1,068,573.8	74,673.4	0.0	2,791.5	0.0
Animal and Plant Health Inspection Service	18,812.2	0.0	0.0	0.0	18,812.2	0.0	0.0	0.0	0.0
Economic Research Service	85,626.4	0.0	0.0	0.0	0.0	0.0	0.0	85,626.4	0.0
Forest Service	254,990.0	1,158.3	10,262.6	7,931.8	193,897.1	5,508.5	0.0	36,231.6	0.0
National Agricultural Statistics Service	5,263.0	5,263.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Institute of Food and Agriculture	871,374.4	0.0	53,818.8	5,113.6	709,478.2	13,773.6	0.0	89,190.1	0.0
Rural Business-Cooperative Service	3,912.5	0.0	0.0	0.0	2,800.0	0.0	0.0	1,112.5	0.0
Department of Commerce	1,281,939.4	160,420.1	260,355.2	445,967.5	81,511.5	258,817.5	86.6	28,592.2	46,188.6
National Institute of Standards and Technology	702,966.5	149,896.4	243,901.2	6,948.1	32,892.1	238,551.5	86.6	583.2	30,107.4
National Oceanic and Atmospheric Administration	541,827.6	4,677.0	8,554.0	439,019.5	48,619.4	20,266.0	0.0	4,610.5	16,081.2
National Telecommunications and Information Administration	7,900.0	0.0	7,900.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Census Bureau	29,245.2	5,846.7	0.0	0.0	0.0	0.0	0.0	23,398.5	0.0
Department of Defense	8,268,405.3	1,756,866.1	3,150,060.6	252,133.0	819,756.6	813,142.3	103,516.1	40,828.6	1,332,102.0
Defense Advanced Research Projects Agency	1,743,305.0	940,606.8	362,288.7	27,354.3	269,609.2	126,586.3	0.0	0.0	16,859.8
Department of the Air Force	2,106,887.0	201,194.7	1,195,657.5	21,533.7	85,338.5	329,428.3	1,198.6	11,991.1	260,544.6
Department of the Army	1,956,186.3	236,860.8	705,793.3	13,689.5	324,821.8	42,629.9	72,836.5	2,370.2	557,184.2
Department of the Navy	1,590,684.9	213,124.8	647,084.2	182,838.3	46,990.7	77,244.2	24,961.6	10,186.9	388,254.1
Other defense agencies	871,342.1	165,079.1	239,236.8	6,717.2	92,996.4	237,253.5	4,519.5	16,280.4	109,259.2
Department of Education	188,656.1	0.0	0.0	0.0	0.0	0.0	0.0	188,656.1	0.0
Department of Energy	11,369,719.3	981,026.5	5,679,410.6	546,258.8	452,646.9	3,197,261.8	0.0	0.0	513,114.7
Advanced Research Projects Agency —Energy	202,477.3	20,788.8	125,171.4	0.0	14,400.0	42,117.1	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	86,994.0	0.0	86,994.0	0.0	0.0	0.0	0.0	0.0	0.0
Energy Efficiency and Renewable Energy	1,270,334.0	0.0	1,270,334.0	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 18

Federal obligations for research, by agency and field of science and engineering: FY 2019

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Environmental Management	8,622.8	0.0	0.0	8,622.8	0.0	0.0	0.0	0.0	0.0
Fossil Energy	659,000.0	0.0	300,000.0	226,000.0	0.0	133,000.0	0.0	0.0	0.0
National Nuclear Security Administration	3,670,121.2	260,499.0	2,483,609.7	4,493.0	979.0	920,440.5	0.0	0.0	100.0
Defense Programs	3,434,107.1	238,856.4	2,482,704.7	0.0	0.0	712,545.9	0.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	236,014.1	21,642.5	905.0	4,493.0	979.0	207,894.5	0.0	0.0	100.0
Nuclear Energy	378,272.7	0.0	378,272.7	0.0	0.0	0.0	0.0	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	40,022.2	0.0	40,022.2	0.0	0.0	0.0	0.0	0.0	0.0
Office of Science	5,053,875.1	699,738.8	995,006.6	307,142.9	437,267.8	2,101,704.3	0.0	0.0	513,014.7
Department of Health and Human Services	38,354,401.0	215,936.9	2,141,185.0	481,880.2	31,640,780.9	88,537.1	2,430,121.6	156,562.2	1,199,397.2
Administration for Children and Families	2,254.8	0.0	0.0	0.0	0.0	0.0	0.0	2,254.8	0.0
Administration for Community Living	65,922.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65,922.4
Agency for Healthcare Research and Quality	308,145.0	43,388.9	803.0	0.0	172,573.6	0.0	7,799.5	20,813.1	62,767.0
Agency for Toxic Substances and Disease Registry	7,000.0	0.0	0.0	7,000.0	0.0	0.0	0.0	0.0	0.0
Centers for Disease Control and Prevention	365,866.5	0.0	0.0	132,738.1	191,714.6	0.0	0.0	1,231.1	40,182.7
Centers for Medicare and Medicaid Services	133,488.6	0.0	0.0	0.0	133,488.6	0.0	0.0	0.0	0.0
Food and Drug Administration	493,052.5	0.0	0.0	0.0	493,052.5	0.0	0.0	0.0	0.0
Health Resources and Services Administration	32,625.8	0.0	0.0	0.0	19,460.4	0.0	0.0	2,265.5	10,899.8
National Institutes of Health	36,929,000.0	172,548.0	2,140,382.0	342,142.0	30,630,491.2	88,537.1	2,422,322.1	112,952.2	1,019,625.3
Office of the Secretary of Health and Human Services	17,045.5	0.0	0.0	0.0	0.0	0.0	0.0	17,045.5	0.0
Office of the Assistant Secretary for Planning and Evaluation	17,045.5	0.0	0.0	0.0	0.0	0.0	0.0	17,045.5	0.0
Department of Homeland Security	279,526.8	57,026.1	112,876.4	8,451.6	9,090.5	35,631.3	57.2	6,351.0	50,042.8
Countering Weapons of Mass Destruction Office	31,194.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31,194.2
Cybersecurity and Infrastructure Security Agency	13,126.0	5,028.3	1,450.0	0.0	0.0	798.0	0.0	5,849.7	0.0

TABLE 18

Federal obligations for research, by agency and field of science and engineering: FY 2019

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Science and Technology Directorate	229,351.6	51,425.8	107,001.2	7,650.9	9,090.5	34,833.3	0.0	501.3	18,848.6
U.S. Coast Guard	5,855.0	571.9	4,425.2	800.7	0.0	0.0	57.2	0.0	0.0
Department of Housing and Urban Development	60,997.5	0.0	1,903.5	0.0	0.0	0.0	0.0	51,039.7	8,054.3
Department of the Interior	689,750.1	3,538.5	11,678.9	461,663.0	202,980.3	241.7	0.0	8,922.7	724.9
Bureau of Indian Affairs	5,000.0	0.0	0.0	5,000.0	0.0	0.0	0.0	0.0	0.0
Bureau of Land Management	13,724.0	0.0	0.0	0.0	13,724.0	0.0	0.0	0.0	0.0
Bureau of Ocean Energy Management	65,080.0	3,538.5	0.0	52,581.6	0.0	0.0	0.0	8,235.0	724.9
Bureau of Reclamation	16,514.0	0.0	8,257.0	8,257.0	0.0	0.0	0.0	0.0	0.0
Bureau of Safety and Environmental Enforcement	7,547.9	0.0	3,421.9	4,125.9	0.0	0.0	0.0	0.0	0.0
National Park Service	10,129.7	0.0	0.0	4,719.0	4,481.3	241.7	0.0	687.6	0.0
Office of Surface Mining Reclamation and Enforcement	327.5	0.0	0.0	327.5	0.0	0.0	0.0	0.0	0.0
U.S. Fish and Wildlife Service	32,650.0	0.0	0.0	0.0	32,650.0	0.0	0.0	0.0	0.0
U.S. Geological Survey	538,777.0	0.0	0.0	386,652.0	152,125.0	0.0	0.0	0.0	0.0
Department of Justice	105,396.4	2,170.4	1,734.1	0.0	7,766.6	9,974.2	4,160.2	72,062.6	7,528.3
Bureau of Prisons	1,249.0	0.0	0.0	0.0	0.0	0.0	0.0	1,249.0	0.0
Federal Bureau of Investigation	998.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	998.4
Office of Justice Programs	103,149.0	2,170.4	1,734.1	0.0	7,766.6	9,974.2	4,160.2	70,813.6	6,529.8
Department of Labor	4,366.1	0.0	0.0	0.0	0.0	0.0	0.0	4,366.1	0.0
Employee Benefits Security Administration	2,642.1	0.0	0.0	0.0	0.0	0.0	0.0	2,642.1	0.0
Occupational Safety and Health Administration	1,724.0	0.0	0.0	0.0	0.0	0.0	0.0	1,724.0	0.0
Department of State	62,200.0	0.0	0.0	0.0	60,000.0	0.0	0.0	2,200.0	0.0
Department of Transportation	745,596.2	54,154.1	588,054.1	30,800.5	9,390.3	4,440.1	21,745.8	1,596.8	35,414.6
Federal Aviation Administration	193,114.6	31,726.6	107,862.7	16,427.7	9,390.3	0.0	21,745.8	0.0	5,961.6
Federal Highway Administration	414,879.6	0.0	414,879.6	0.0	0.0	0.0	0.0	0.0	0.0
Federal Motor Carrier Safety Administration	7,766.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7,766.4
Federal Railroad Administration	31,936.1	0.0	30,339.3	0.0	0.0	0.0	0.0	1,596.8	0.0
Federal Transit Administration	2,750.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,750.0
National Highway Traffic Safety Administration	76,323.0	22,427.5	21,132.1	14,372.8	0.0	0.0	0.0	0.0	18,390.6

TABLE 18

Federal obligations for research, by agency and field of science and engineering: FY 2019

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Office of the Secretary of Transportation	8,210.9	0.0	8,210.9	0.0	0.0	0.0	0.0	0.0	0.0
Pipeline and Hazardous Materials Safety Administration	10,615.6	0.0	5,629.6	0.0	0.0	4,440.1	0.0	0.0	546.0
Department of the Treasury	46,177.7	0.0	177.7	0.0	0.0	46,000.0	0.0	0.0	0.0
Bureau of Engraving and Printing	46,000.0	0.0	0.0	0.0	0.0	46,000.0	0.0	0.0	0.0
U.S. Mint	177.7	0.0	177.7	0.0	0.0	0.0	0.0	0.0	0.0
Department of Veterans Affairs	1,477,605.7	0.0	63,927.1	0.0	1,185,002.5	0.0	157,624.3	0.0	71,051.9
Other agencies									
Administrative Office of the U.S. Courts	6,448.3	6,448.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agency for International Development	171,713.9	0.0	0.0	587.9	158,222.0	0.0	0.0	12,904.0	0.0
Appalachian Regional Commission	898.9	0.0	0.0	0.0	0.0	0.0	0.0	898.9	0.0
Consumer Product Safety Commission	856.3	0.0	0.0	817.0	0.0	39.3	0.0	0.0	0.0
Environmental Protection Agency	404,784.0	8,622.4	57,407.5	166,835.6	159,914.7	9,665.5	0.0	2,338.3	0.0
Federal Communications Commission	2,005.3	75.0	1,500.0	0.0	0.0	300.0	0.0	130.3	0.0
Federal Trade Commission	6,003.2	0.0	0.0	0.0	0.0	0.0	0.0	6,003.2	0.0
Library of Congress	867.6	0.0	0.0	0.0	0.0	867.6	0.0	0.0	0.0
National Aeronautics and Space Administration	8,111,494.3	4,175.2	1,916,816.7	1,735,989.2	143,695.6	4,228,233.8	0.0	0.0	82,583.8
National Archives and Records Administration	511.0	511.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Science Foundation	5,996,140.0	1,071,069.5	1,111,319.2	915,649.6	695,582.0	979,034.2	36,242.3	193,348.8	993,894.2
Nuclear Regulatory Commission	74,856.6	0.0	74,076.6	0.0	0.0	0.0	0.0	0.0	780.0
Patient-Centered Outcomes Research Trust Fund	578,430.5	0.0	0.0	0.0	578,430.5	0.0	0.0	0.0	0.0
Smithsonian Institution	236,440.0	0.0	0.0	9,507.0	101,475.0	49,991.0	0.0	11,571.0	63,896.0
Social Security Administration	146,241.0	0.0	0.0	0.0	0.0	0.0	0.0	146,241.0	0.0
Tennessee Valley Authority	5,614.0	0.0	5,614.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Agency for Global Media	6,107.0	0.0	0.0	0.0	0.0	0.0	0.0	6,107.0	0.0
U.S. Postal Service	26,664.2	0.0	26,664.2	0.0	0.0	0.0	0.0	0.0	0.0

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 19

Preliminary federal obligations for research, by agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
All agencies	85,262,440.2	4,740,280.7	16,417,413.1	4,778,290.4	40,665,382.6	9,607,645.8	2,932,949.8	1,018,255.7	5,102,222.1
Departments									
Department of Agriculture	2,689,286.2	8,180.6	91,171.2	18,196.7	2,235,173.6	103,259.2	0.0	233,305.0	0.0
Agricultural Marketing Service	3,476.3	0.0	0.0	0.0	3,476.3	0.0	0.0	0.0	0.0
Agricultural Research Service	1,272,600.0	1,654.4	11,453.4	5,599.4	1,169,137.6	81,700.9	0.0	3,054.2	0.0
Animal and Plant Health Inspection Service	18,856.0	0.0	0.0	0.0	18,856.0	0.0	0.0	0.0	0.0
Economic Research Service	85,257.0	0.0	0.0	0.0	0.0	0.0	0.0	85,257.0	0.0
Foreign Agricultural Service	500.0	0.0	0.0	0.0	500.0	0.0	0.0	0.0	0.0
Forest Service	259,239.9	1,118.3	10,505.2	6,464.4	198,698.0	5,600.4	0.0	36,853.6	0.0
National Agricultural Statistics Service	5,407.9	5,407.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Institute of Food and Agriculture	1,040,000.0	0.0	69,212.6	6,132.9	841,705.7	15,957.9	0.0	106,991.0	0.0
Rural Business-Cooperative Service	3,949.2	0.0	0.0	0.0	2,800.0	0.0	0.0	1,149.2	0.0
Department of Commerce	1,370,429.6	169,032.0	296,519.6	469,557.2	86,592.7	259,324.3	85.8	40,302.4	49,015.5
National Institute of Standards and Technology	747,936.6	160,156.4	279,045.6	6,886.4	32,662.6	237,450.3	85.8	578.0	31,071.5
National Oceanic and Atmospheric Administration	575,822.0	5,048.0	9,294.0	462,670.8	53,930.1	21,874.0	0.0	5,061.0	17,944.1
National Telecommunications and Information Administration	8,180.0	0.0	8,180.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Census Bureau	38,491.0	3,827.6	0.0	0.0	0.0	0.0	0.0	34,663.4	0.0
Department of Defense	8,464,939.1	1,915,263.5	3,118,080.0	253,782.0	875,862.7	776,206.2	107,945.9	40,171.7	1,377,627.2
Defense Advanced Research Projects Agency	1,994,780.0	1,077,502.7	420,711.4	32,722.0	304,453.2	139,779.2	0.0	0.0	19,611.5
Department of the Air Force	2,164,776.1	200,871.6	1,257,258.0	21,946.9	84,680.9	321,870.4	1,145.1	7,812.0	269,191.2
Department of the Army	1,812,810.5	223,210.5	619,271.4	12,988.8	305,109.9	46,249.7	67,319.2	2,639.5	536,021.6
Department of the Navy	1,546,788.7	207,699.7	629,303.8	177,659.5	45,659.7	75,056.3	24,254.5	9,898.4	377,256.9
Other defense agencies	945,783.7	205,979.0	191,535.5	8,464.7	135,959.1	193,250.5	15,227.1	19,821.9	175,546.0
Department of Education	191,301.1	0.0	0.0	0.0	0.0	0.0	0.0	8,841.1	182,460.0
Department of Energy	12,681,707.7	1,137,900.7	6,644,107.6	239,661.1	462,713.8	3,330,500.6	0.0	0.0	866,824.0
Advanced Research Projects Agency –Energy	212,500.0	21,817.8	131,367.5	0.0	15,112.8	44,201.9	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	83,285.0	0.0	83,285.0	0.0	0.0	0.0	0.0	0.0	0.0

Preliminary federal obligations for research, by agency and field of science and engineering: FY 2020

[illegible]

TABLE 19

Preliminary federal obligations for research, by agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
National Highway Traffic Safety Administration	74,240.7	21,815.6	20,555.5	13,980.6	0.0	0.0	0.0	0.0	17,888.9
Office of the Secretary of Transportation	15,112.7	0.0	15,112.7	0.0	0.0	0.0	0.0	0.0	0.0
Pipeline and Hazardous Materials Safety Administration	20,498.4	0.0	4,107.0	0.0	0.0	16,391.4	0.0	0.0	0.0
Department of the Treasury	49,604.4	0.0	175.6	0.0	0.0	49,428.7	0.0	0.0	0.0
Bureau of Engraving and Printing	49,428.7	0.0	0.0	0.0	0.0	49,428.7	0.0	0.0	0.0
U.S. Mint	175.6	0.0	175.6	0.0	0.0	0.0	0.0	0.0	0.0
Department of Veterans Affairs	1,570,511.8	0.0	67,965.6	0.0	1,259,863.2	0.0	167,581.9	0.0	75,101.1
Other agencies									
Administrative Office of the U.S. Courts	7,671.6	7,671.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agency for International Development	171,713.9	0.0	0.0	587.9	158,222.0	0.0	0.0	12,904.0	0.0
Consumer Product Safety Commission	200.0	0.0	0.0	150.0	0.0	50.0	0.0	0.0	0.0
Environmental Protection Agency	411,906.4	8,774.1	58,417.6	169,771.1	162,728.5	9,835.6	0.0	2,379.5	0.0
Federal Communications Commission	1,800.0	300.0	1,050.0	0.0	0.0	450.0	0.0	0.0	0.0
Federal Trade Commission	7,324.8	0.0	0.0	0.0	0.0	0.0	0.0	7,324.8	0.0
Library of Congress	1,114.3	0.0	0.0	0.0	0.0	1,114.3	0.0	0.0	0.0
National Aeronautics and Space Administration	7,615,288.2	3,508.1	1,866,276.0	1,649,392.2	138,722.8	3,876,603.6	0.0	0.0	80,785.5
National Science Foundation	6,156,565.0	1,099,615.3	1,143,365.1	938,599.0	713,018.4	1,003,625.5	37,146.8	198,209.2	1,022,985.9
Nuclear Regulatory Commission	65,286.1	0.0	64,490.4	0.0	0.0	0.0	0.0	0.0	795.7
Patient-Centered Outcomes Research Trust Fund	540,670.0	0.0	0.0	0.0	540,670.0	0.0	0.0	0.0	0.0
Smithsonian Institution	241,440.0	0.0	0.0	10,507.0	103,375.0	49,991.0	0.0	13,571.0	63,996.0
Social Security Administration	131,774.0	0.0	0.0	0.0	0.0	0.0	0.0	131,774.0	0.0
Tennessee Valley Authority	5,880.0	0.0	5,880.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Agency for Global Media	6,198.0	0.0	0.0	0.0	0.0	0.0	0.0	6,198.0	0.0
U.S. Postal Service	26,595.0	0.0	26,595.0	0.0	0.0	0.0	0.0	0.0	0.0

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 20

Federal obligations for research in computer sciences and mathematics, by agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Computer sciences	Mathematics	Other computer sciences and mathematics
All agencies	4,329,973.5	2,896,797.3	1,156,917.0	276,259.1
Departments				
Department of Agriculture	7,933.4	2,565.4	5,368.0	0.0
Agricultural Research Service	1,512.1	1,512.1	0.0	0.0
Forest Service	1,158.3	1,053.3	105.0	0.0
National Agricultural Statistics Service	5,263.0	0.0	5,263.0	0.0
Department of Commerce	160,420.1	137,738.4	9,903.8	12,777.8
National Institute of Standards and Technology	149,896.4	135,962.4	1,916.0	12,018.0
National Oceanic and Atmospheric Administration	4,677.0	1,559.0	3,118.0	0.0
U.S. Census Bureau	5,846.7	217.0	4,869.8	759.8
Department of Defense	1,756,866.1	1,425,602.2	93,704.8	237,559.1
Defense Advanced Research Projects Agency	940,606.8	822,390.7	3,701.6	114,514.5
Department of the Air Force	201,194.7	94,535.4	37,181.2	69,478.1
Department of the Army	236,860.8	193,170.5	10,443.8	33,246.6
Department of the Navy	213,124.8	190,344.2	20,828.0	1,952.6
Other defense agencies	165,079.1	125,161.5	21,550.3	18,367.3
Department of Energy	981,026.5	329,586.6	630,597.4	20,842.5
Advanced Research Projects Agency—Energy	20,788.8	20,788.8	0.0	0.0
National Nuclear Security Administration	260,499.0	239,656.4	0.0	20,842.5
Defense Programs	238,856.4	238,856.4	0.0	0.0
Office of Defense Nuclear Nonproliferation	21,642.5	800.0	0.0	20,842.5
Office of Science	699,738.8	69,141.4	630,597.4	0.0
Department of Health and Human Services	215,936.9	34,988.8	180,948.1	0.0
Agency for Healthcare Research and Quality	43,388.9	34,988.8	8,400.1	0.0
National Institutes of Health	172,548.0	0.0	172,548.0	0.0
Department of Homeland Security	57,026.1	56,922.9	0.0	103.2
Cybersecurity and Infrastructure Security Agency	5,028.3	5,028.3	0.0	0.0
Science and Technology Directorate	51,425.8	51,425.8	0.0	0.0
U.S. Coast Guard	571.9	468.7	0.0	103.2
Department of the Interior	3,538.5	3,538.5	0.0	0.0
Bureau of Ocean Energy Management	3,538.5	3,538.5	0.0	0.0
Department of Justice	2,170.4	1,326.1	844.4	0.0
Office of Justice Programs	2,170.4	1,326.1	844.4	0.0
Department of Transportation	54,154.1	54,154.1	0.0	0.0
Federal Aviation Administration	31,726.6	31,726.6	0.0	0.0
National Highway Traffic Safety Administration	22,427.5	22,427.5	0.0	0.0
Other agencies				
Administrative Office of the U.S. Courts	6,448.3	6,448.3	0.0	0.0
Environmental Protection Agency	8,622.4	4,743.0	3,078.2	801.3
Federal Communications Commission	75.0	75.0	0.0	0.0
National Aeronautics and Space Administration	4,175.2	0.0	0.0	4,175.2
National Archives and Records Administration	511.0	511.0	0.0	0.0
National Science Foundation	1,071,069.5	838,597.2	232,472.3	0.0

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):
National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 21

Federal obligations for research in engineering, by agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Aeronautical engineering	Astronautical engineering	Chemical engineering	Civil engineering	Electrical engineering	Mechanical engineering	Metallurgy and materials engineering	Other engineering
Other agencies									
Environmental Protection Agency	57,407.5	0.0	0.0	20,873.3	2,409.6	0.0	685.5	519.3	32,919.8
Federal Communications Commission	1,500.0	0.0	0.0	0.0	0.0	1,500.0	0.0	0.0	0.0
National Aeronautics and Space Administration	1,916,816.7	546,257.7	733,048.0	0.0	0.0	4,480.5	0.0	16,318.6	616,711.9
National Science Foundation	1,111,319.2	0.0	0.0	62,052.3	5,027.9	113,363.9	62,448.6	183,487.7	684,938.8
Nuclear Regulatory Commission	74,076.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	74,076.6
Tennessee Valley Authority	5,614.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,614.0
U.S. Postal Service	26,664.2	0.0	0.0	0.0	0.0	15,038.6	11,625.6	0.0	0.0

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 22

Federal obligations for research in environmental sciences, by agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Atmospheric sciences	Geological sciences	Oceanography	Other environmental sciences
All agencies	5,074,704.0	824,246.9	239,143.0	819,217.6	3,192,096.6
Departments					
Department of Agriculture	18,163.1	14,439.3	116.3	0.0	3,607.5
Agricultural Research Service	5,117.8	5,001.5	116.3	0.0	0.0
Forest Service	7,931.8	4,324.3	0.0	0.0	3,607.5
National Institute of Food and Agriculture	5,113.6	5,113.6	0.0	0.0	0.0
Department of Commerce	445,967.5	195,366.6	649.5	226,014.5	23,937.0
National Institute of Standards and Technology	6,948.1	6,751.6	196.5	0.0	0.0
National Oceanic and Atmospheric Administration	439,019.5	188,615.0	453.0	226,014.5	23,937.0
Department of Defense	252,133.0	32,459.8	1,886.0	198,819.2	18,968.0
Defense Advanced Research Projects Agency	27,354.3	12,775.1	0.0	14,579.2	0.0
Department of the Air Force	21,533.7	16,299.8	73.7	0.0	5,160.1
Department of the Army	13,689.5	1,500.9	720.9	0.0	11,467.7
Department of the Navy	182,838.3	0.0	0.0	180,498.1	2,340.2
Other defense agencies	6,717.2	1,883.9	1,091.4	3,742.0	0.0
Department of Energy	546,258.8	207,323.7	4,905.3	0.0	334,029.7
Environmental Management	8,622.8	0.0	0.0	0.0	8,622.8
Fossil Energy	226,000.0	0.0	0.0	0.0	226,000.0
National Nuclear Security Administration	4,493.0	419.0	4,074.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	4,493.0	419.0	4,074.0	0.0	0.0
Office of Science	307,142.9	206,904.7	831.3	0.0	99,406.8
Department of Health and Human Services	481,880.2	0.0	0.0	0.0	481,880.2
Agency for Toxic Substances and Disease Registry	7,000.0	0.0	0.0	0.0	7,000.0
Centers for Disease Control and Prevention	132,738.1	0.0	0.0	0.0	132,738.1
National Institutes of Health	342,142.0	0.0	0.0	0.0	342,142.0
Department of Homeland Security	8,451.6	0.0	0.0	3,791.5	4,660.1
Science and Technology Directorate	7,650.9	0.0	0.0	3,791.5	3,859.4
U.S. Coast Guard	800.7	0.0	0.0	0.0	800.7
Department of the Interior	461,663.0	1,321.6	35,120.8	39,172.2	386,048.5
Bureau of Indian Affairs	5,000.0	0.0	0.0	0.0	5,000.0
Bureau of Ocean Energy Management	52,581.6	0.0	10,430.0	38,705.8	3,445.8
Bureau of Reclamation	8,257.0	0.0	0.0	0.0	8,257.0
Bureau of Safety and Environmental Enforcement	4,125.9	0.0	0.0	160.2	3,965.8
National Park Service	4,719.0	1,321.6	95.5	306.2	2,995.7
Office of Surface Mining Reclamation and Enforcement	327.5	0.0	0.0	0.0	327.5
U.S. Geological Survey	386,652.0	0.0	24,595.4	0.0	362,056.7
Department of Transportation	30,800.5	16,427.7	0.0	0.0	14,372.8
Federal Aviation Administration	16,427.7	16,427.7	0.0	0.0	0.0
National Highway Traffic Safety Administration	14,372.8	0.0	0.0	0.0	14,372.8
Other agencies					

TABLE 22

Federal obligations for research in environmental sciences, by agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Atmospheric sciences	Geological sciences	Oceanography	Other environmental sciences
Agency for International Development	587.9	0.0	0.0	0.0	587.9
Consumer Product Safety Commission	817.0	0.0	0.0	0.0	817.0
Environmental Protection Agency	166,835.6	58,398.6	2,630.0	14,108.4	91,698.6
National Aeronautics and Space Administration	1,735,989.2	0.0	0.0	0.0	1,735,989.2
National Science Foundation	915,649.6	298,509.6	185,296.0	336,343.7	95,500.3
Smithsonian Institution	9,507.0	0.0	8,539.0	968.0	0.0

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 23

Federal obligations for research in life sciences, by agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Agricultural sciences	Biological sciences (excluding environmental biology)	Environmental biology	Medical sciences	Other life sciences
All agencies	38,303,662.4	1,445,518.9	18,910,386.0	924,187.5	13,774,777.7	3,248,792.4
Departments						
Department of Agriculture	1,997,416.6	1,262,222.6	268,989.2	441,522.2	24,462.6	220.0
Agricultural Marketing Service	3,855.3	3,855.3	0.0	0.0	0.0	0.0
Agricultural Research Service	1,068,573.8	830,130.7	74,440.8	145,043.2	18,959.1	0.0
Animal and Plant Health Inspection Service	18,812.2	18,812.2	0.0	0.0	0.0	0.0
Forest Service	193,897.1	27,045.7	12,558.0	154,073.4	0.0	220.0
National Institute of Food and Agriculture	709,478.2	379,578.7	181,990.5	142,405.6	5,503.4	0.0
Rural Business-Cooperative Service	2,800.0	2,800.0	0.0	0.0	0.0	0.0
Department of Commerce	81,511.5	8,153.0	43,471.6	14,061.6	4,983.0	10,842.3
National Institute of Standards and Technology	32,892.1	0.0	32,892.1	0.0	0.0	0.0
National Oceanic and Atmospheric Administration	48,619.4	8,153.0	10,579.4	14,061.6	4,983.0	10,842.3
Department of Defense	819,756.6	6,544.6	246,903.3	41,052.5	459,819.2	65,437.0
Defense Advanced Research Projects Agency	269,609.2	0.0	124,368.8	38,069.8	107,170.6	0.0
Department of the Air Force	85,338.5	3,660.7	29,065.8	17.7	89.0	52,505.4
Department of the Army	324,821.8	0.0	5,448.5	0.0	314,706.8	4,666.5
Department of the Navy	46,990.7	0.0	18,050.2	0.0	22,499.9	6,440.6
Other defense agencies	92,996.4	2,883.9	69,970.1	2,965.0	15,352.9	1,824.6
Department of Energy	452,646.9	14,622.4	401,105.2	36,919.3	0.0	0.0
Advanced Research Projects Agency—Energy	14,400.0	14,400.0	0.0	0.0	0.0	0.0
National Nuclear Security Administration	979.0	0.0	284.0	695.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	979.0	0.0	284.0	695.0	0.0	0.0
Office of Science	437,267.8	222.4	400,821.2	36,224.3	0.0	0.0
Department of Health and Human Services	31,640,780.9	0.0	17,203,733.6	0.0	11,414,980.3	3,022,067.0
Agency for Healthcare Research and Quality	172,573.6	0.0	0.0	0.0	171,307.5	1,266.1
Centers for Disease Control and Prevention	191,714.6	0.0	53,491.7	0.0	59,634.6	78,588.2
Centers for Medicare and Medicaid Services	133,488.6	0.0	0.0	0.0	133,488.6	0.0
Food and Drug Administration	493,052.5	0.0	493,052.5	0.0	0.0	0.0
Health Resources and Services Administration	19,460.4	0.0	0.0	0.0	19,460.4	0.0
National Institutes of Health	30,630,491.2	0.0	16,657,189.3	0.0	11,031,089.1	2,942,212.7
Department of Homeland Security	9,090.5	0.0	8,213.5	877.1	0.0	0.0

TABLE 23

Federal obligations for research in life sciences, by agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Agricultural sciences	Biological sciences (excluding environmental biology)	Environmental biology	Medical sciences	Other life sciences
Science and Technology Directorate	9,090.5	0.0	8,213.5	877.1	0.0	0.0
Department of the Interior	202,980.3	32,650.0	83,912.6	86,417.7	0.0	0.0
Bureau of Land Management	13,724.0	0.0	0.0	13,724.0	0.0	0.0
National Park Service	4,481.3	0.0	3,286.3	1,195.0	0.0	0.0
U.S. Fish and Wildlife Service	32,650.0	32,650.0	0.0	0.0	0.0	0.0
U.S. Geological Survey	152,125.0	0.0	80,626.2	71,498.7	0.0	0.0
Department of Justice	7,766.6	0.0	6,066.5	0.0	0.0	1,700.0
Office of Justice Programs	7,766.6	0.0	6,066.5	0.0	0.0	1,700.0
Department of State	60,000.0	0.0	0.0	0.0	60,000.0	0.0
Department of Transportation	9,390.3	0.0	0.0	0.0	9,390.3	0.0
Federal Aviation Administration	9,390.3	0.0	0.0	0.0	9,390.3	0.0
Department of Veterans Affairs	1,185,002.5	0.0	0.0	0.0	1,185,002.5	0.0
Other agencies						
Agency for International Development	158,222.0	120,750.2	0.0	0.0	37,471.8	0.0
Environmental Protection Agency	159,914.7	576.2	110,535.8	44,964.7	237.6	3,600.4
National Aeronautics and Space Administration	143,695.6	0.0	0.0	0.0	0.0	143,695.6
National Science Foundation	695,582.0	0.0	532,387.7	163,194.3	0.0	0.0
Patient-Centered Outcomes Research Trust Fund	578,430.5	0.0	0.0	0.0	578,430.5	0.0
Smithsonian Institution	101,475.0	0.0	5,067.0	95,178.0	0.0	1,230.0

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 24

Federal obligations for research in physical sciences, by agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Astronomy	Chemistry	Physics	Other physical sciences
All agencies	9,816,132.9	1,583,417.8	1,125,457.5	3,445,977.6	3,661,279.9
Departments					
Department of Agriculture	93,955.5	0.0	91,164.0	2,791.5	0.0
Agricultural Research Service	74,673.4	0.0	71,881.9	2,791.5	0.0
Forest Service	5,508.5	0.0	5,508.5	0.0	0.0
National Institute of Food and Agriculture	13,773.6	0.0	13,773.6	0.0	0.0
Department of Commerce	258,817.5	0.0	48,233.0	207,406.8	3,177.6
National Institute of Standards and Technology	238,551.5	0.0	46,674.0	188,699.8	3,177.6
National Oceanic and Atmospheric Administration	20,266.0	0.0	1,559.0	18,707.0	0.0
Department of Defense	813,142.3	5,884.6	225,986.1	426,102.8	155,168.8
Defense Advanced Research Projects Agency	126,586.3	0.0	43,754.8	82,403.1	428.4
Department of the Air Force	329,428.3	319.2	21,674.9	252,655.6	54,778.5
Department of the Army	42,629.9	0.0	16,106.1	23,032.3	3,491.5
Department of the Navy	77,244.2	5,565.4	9,969.0	11,436.2	50,273.6
Other defense agencies	237,253.5	0.0	134,481.2	56,575.5	46,196.8
Department of Energy	3,197,261.8	0.0	404,665.8	2,537,883.5	254,712.4
Advanced Research Projects Agency—Energy	42,117.1	0.0	19,871.3	22,245.8	0.0
Fossil Energy	133,000.0	0.0	133,000.0	0.0	0.0
National Nuclear Security Administration	920,440.5	0.0	16,004.0	649,724.1	254,712.4
Defense Programs	712,545.9	0.0	0.0	582,206.5	130,339.4
Office of Defense Nuclear Nonproliferation	207,894.5	0.0	16,004.0	67,517.6	124,373.0
Office of Science	2,101,704.3	0.0	235,790.6	1,865,913.6	0.0
Department of Health and Human Services	88,537.1	0.0	87,432.1	0.0	1,105.0
National Institutes of Health	88,537.1	0.0	87,432.1	0.0	1,105.0
Department of Homeland Security	35,631.3	0.0	8,161.2	3,619.5	23,850.5
Cybersecurity and Infrastructure Security Agency	798.0	0.0	798.0	0.0	0.0
Science and Technology Directorate	34,833.3	0.0	7,363.2	3,619.5	23,850.5
Department of the Interior	241.7	0.0	0.0	0.0	241.7
National Park Service	241.7	0.0	0.0	0.0	241.7
Department of Justice	9,974.2	0.0	5,176.7	0.0	4,797.6
Office of Justice Programs	9,974.2	0.0	5,176.7	0.0	4,797.6
Department of Transportation	4,440.1	0.0	3,440.1	0.0	1,000.0
Pipeline and Hazardous Materials Safety Administration	4,440.1	0.0	3,440.1	0.0	1,000.0
Department of the Treasury	46,000.0	0.0	0.0	0.0	46,000.0
Bureau of Engraving and Printing	46,000.0	0.0	0.0	0.0	46,000.0
Other agencies					
Consumer Product Safety Commission	39.3	0.0	0.0	0.0	39.3
Environmental Protection Agency	9,665.5	0.0	8,523.1	0.0	1,142.4
Federal Communications Commission	300.0	0.0	0.0	300.0	0.0
Library of Congress	867.6	0.0	867.6	0.0	0.0
National Aeronautics and Space Administration	4,228,233.8	1,270,677.3	0.0	7,022.0	2,950,534.4
National Science Foundation	979,034.2	256,864.8	241,807.9	260,851.3	219,510.2
Smithsonian Institution	49,991.0	49,991.0	0.0	0.0	0.0

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 25

Federal obligations for research in psychology, by agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Biological aspects	Social aspects	Other psychological sciences
All agencies	2,753,554.0	17,523.2	52,740.1	2,683,290.7
Departments				
Department of Commerce	86.6	86.6	0.0	0.0
National Institute of Standards and Technology	86.6	86.6	0.0	0.0
Department of Defense	103,516.1	4,929.4	13,497.3	85,089.4
Department of the Air Force	1,198.6	0.0	386.7	811.8
Department of the Army	72,836.5	0.0	0.0	72,836.5
Department of the Navy	24,961.6	3,049.3	11,230.3	10,681.9
Other defense agencies	4,519.5	1,880.1	1,880.2	759.2
Department of Health and Human Services	2,430,121.6	417.0	7,382.5	2,422,322.1
Agency for Healthcare Research and Quality	7,799.5	417.0	7,382.5	0.0
National Institutes of Health	2,422,322.1	0.0	0.0	2,422,322.1
Department of Homeland Security	57.2	0.0	0.0	57.2
U.S. Coast Guard	57.2	0.0	0.0	57.2
Department of Justice	4,160.2	942.3	2,668.7	549.3
Office of Justice Programs	4,160.2	942.3	2,668.7	549.3
Department of Transportation	21,745.8	0.0	21,745.8	0.0
Federal Aviation Administration	21,745.8	0.0	21,745.8	0.0
Department of Veterans Affairs	157,624.3	0.0	0.0	157,624.3
Other agencies				
National Science Foundation	36,242.3	11,148.0	7,445.9	17,648.4

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 26

Federal obligations for research in social sciences, by agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Anthropology	Economics	Political science	Sociology	Other social sciences
All agencies	1,155,672.8	34,948.4	294,908.0	14,186.3	224,016.7	587,613.4
Departments						
Department of Agriculture	214,952.1	0.0	179,682.5	0.0	34,168.9	1,100.8
Agricultural Research Service	2,791.5	0.0	2,791.5	0.0	0.0	0.0
Economic Research Service	85,626.4	0.0	85,626.4	0.0	0.0	0.0
Forest Service	36,231.6	0.0	26,144.7	0.0	8,986.1	1,100.8
National Institute of Food and Agriculture	89,190.1	0.0	64,007.4	0.0	25,182.7	0.0
Rural Business-Cooperative Service	1,112.5	0.0	1,112.5	0.0	0.0	0.0
Department of Commerce	28,592.2	0.0	14,578.1	1,812.0	2,726.8	9,475.3
National Institute of Standards and Technology	583.2	0.0	583.2	0.0	0.0	0.0
National Oceanic and Atmospheric Administration	4,610.5	0.0	906.0	1,812.0	906.0	986.5
U.S. Census Bureau	23,398.5	0.0	13,088.9	0.0	1,820.8	8,488.8
Department of Defense	40,828.6	0.0	1,100.0	0.0	0.0	39,728.6
Department of the Air Force	11,991.1	0.0	0.0	0.0	0.0	11,991.1
Department of the Army	2,370.2	0.0	0.0	0.0	0.0	2,370.2
Department of the Navy	10,186.9	0.0	0.0	0.0	0.0	10,186.9
Other defense agencies	16,280.4	0.0	1,100.0	0.0	0.0	15,180.4
Department of Education	188,656.1	0.0	0.0	0.0	0.0	188,656.1
Department of Health and Human Services	156,562.2	36.1	9,956.5	0.0	0.0	146,569.7
Administration for Children and Families	2,254.8	0.0	0.0	0.0	0.0	2,254.8
Agency for Healthcare Research and Quality	20,813.1	36.1	9,956.5	0.0	0.0	10,820.5
Centers for Disease Control and Prevention	1,231.1	0.0	0.0	0.0	0.0	1,231.1
Health Resources and Services Administration	2,265.5	0.0	0.0	0.0	0.0	2,265.5
National Institutes of Health	112,952.2	0.0	0.0	0.0	0.0	112,952.2
Office of the Secretary of Health and Human Services	17,045.5	0.0	0.0	0.0	0.0	17,045.5
Office of the Assistant Secretary for Planning and Evaluation	17,045.5	0.0	0.0	0.0	0.0	17,045.5
Department of Homeland Security	6,351.0	0.0	3,756.3	2,093.3	501.3	0.0
Cybersecurity and Infrastructure Security Agency	5,849.7	0.0	3,756.3	2,093.3	0.0	0.0
Science and Technology Directorate	501.3	0.0	0.0	0.0	501.3	0.0
Department of Housing and Urban Development	51,039.7	0.0	42,979.7	0.0	2,857.9	5,202.1
Department of the Interior	8,922.7	189.0	5,778.8	0.0	2,267.3	687.6
Bureau of Ocean Energy Management	8,235.0	189.0	5,778.8	0.0	2,267.3	0.0
National Park Service	687.6	0.0	0.0	0.0	0.0	687.6
Department of Justice	72,062.6	2,847.2	0.0	0.0	14,490.5	54,725.0
Bureau of Prisons	1,249.0	0.0	0.0	0.0	1,249.0	0.0
Office of Justice Programs	70,813.6	2,847.2	0.0	0.0	13,241.5	54,725.0
Department of Labor	4,366.1	0.0	2,642.1	0.0	0.0	1,724.0
Employee Benefits Security Administration	2,642.1	0.0	2,642.1	0.0	0.0	0.0
Occupational Safety and Health Administration	1,724.0	0.0	0.0	0.0	0.0	1,724.0
Department of State	2,200.0	0.0	0.0	0.0	2,200.0	0.0
Department of Transportation	1,596.8	0.0	0.0	0.0	0.0	1,596.8
Federal Railroad Administration	1,596.8	0.0	0.0	0.0	0.0	1,596.8
Other agencies						
Agency for International Development	12,904.0	0.0	0.0	0.0	4,590.0	8,314.0
Appalachian Regional Commission	898.9	0.0	898.9	0.0	0.0	0.0
Environmental Protection Agency	2,338.3	0.0	2,338.3	0.0	0.0	0.0

TABLE 26

Federal obligations for research in social sciences, by agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Anthropology	Economics	Political science	Sociology	Other social sciences
Federal Communications Commission	130.3	0.0	130.3	0.0	0.0	0.0
Federal Trade Commission	6,003.2	0.0	6,003.2	0.0	0.0	0.0
National Science Foundation	193,348.8	20,305.1	25,063.1	10,281.0	13,973.1	123,726.6
Smithsonian Institution	11,571.0	11,571.0	0.0	0.0	0.0	0.0
Social Security Administration	146,241.0	0.0	0.0	0.0	146,241.0	0.0
U.S. Agency for Global Media	6,107.0	0.0	0.0	0.0	0.0	6,107.0

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 27

Federal obligations for basic research, by agency and performer: FY 2019

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
All agencies	40,017,257.6	7,240,357.2	3,636,609.5	555,746.2	18,626,506.6	4,419,740.9	3,724,619.4	1,478,129.7	86,025.0	249,523.2
Departments										
Department of Agriculture	1,056,543.3	697,682.6	2,562.6	0.0	334,000.0	0.0	18,585.3	0.0	2,221.1	1,491.7
Agricultural Research Service	646,187.1	573,709.0	0.0	0.0	63,659.2	0.0	7,153.0	0.0	174.2	1,491.7
Animal and Plant Health Inspection Service	18,812.2	13,585.9	0.0	0.0	5,226.3	0.0	0.0	0.0	0.0	0.0
Forest Service	84,664.4	79,896.1	0.0	0.0	2,594.6	0.0	230.4	0.0	1,943.4	0.0
National Institute of Food and Agriculture	306,879.6	30,491.6	2,562.6	0.0	262,519.9	0.0	11,202.0	0.0	103.6	0.0
Department of Commerce	253,176.4	236,245.6	6,002.8	0.0	8,399.5	0.0	1,703.9	522.0	0.0	302.6
National Institute of Standards and Technology	253,176.4	236,245.6	6,002.8	0.0	8,399.5	0.0	1,703.9	522.0	0.0	302.6
Department of Defense	2,510,170.5	572,114.5	327,350.3	13,895.9	1,373,405.5	9,302.0	106,203.4	21,567.1	2,528.9	83,802.9
Defense Advanced Research Projects Agency	478,318.0	14,862.2	138,394.3	8,693.7	242,713.7	5,971.7	41,151.3	7,729.3	0.0	18,801.9
Department of the Air Force	559,429.2	100,461.1	60,226.8	149.6	360,521.0	204.3	3,423.8	1,107.6	0.0	33,335.0
Department of the Army	494,668.0	159,229.3	65,633.3	0.0	237,941.9	191.8	12,139.7	9,768.7	1,900.0	7,863.3
Department of the Navy	655,662.5	182,875.2	22,055.8	100.0	391,695.2	326.6	34,904.7	875.0	628.9	22,201.0
Other defense agencies	322,092.8	114,686.6	41,040.1	4,952.7	140,533.9	2,607.5	14,583.9	2,086.5	0.0	1,601.7
Department of Education	57,276.0	2,924.9	388.6	0.0	41,959.5	0.0	11,808.0	0.0	195.0	0.0
Department of Energy	5,074,534.1	269,227.6	280,064.3	284,529.0	820,246.5	1,987,385.4	20,314.4	1,410,285.5	1,245.2	1,236.2
Electricity Delivery and Energy Reliability	14,649.0	334.9	965.4	3,415.9	1,737.4	1,467.2	1,024.0	5,659.0	45.2	0.0
Fossil Energy	33,000.0	0.0	0.0	0.0	33,000.0	0.0	0.0	0.0	0.0	0.0
National Nuclear Security Administration	101,820.0	0.0	2,684.8	57,431.4	13,751.4	7,466.5	0.0	20,485.9	0.0	0.0
Office of Defense Nuclear Nonproliferation	101,820.0	0.0	2,684.8	57,431.4	13,751.4	7,466.5	0.0	20,485.9	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	989.0	0.0	989.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Science	4,924,076.1	268,892.7	275,425.2	223,681.6	771,757.8	1,978,451.6	19,290.4	1,384,140.6	1,200.0	1,236.2

Federal obligations for basic research, by agency and performer: FY 2019

[illegible]

TABLE 27

Federal obligations for basic research, by agency and performer: FY 2019

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
National Aeronautics and Space Administration	5,688,975.1	735,294.0	1,762,603.7	2,025.5	735,394.5	2,109,267.7	305,380.2	21,910.4	2,124.4	14,974.7
National Science Foundation	5,212,090.0	35,387.8	240,141.4	0.0	4,376,964.0	303,201.7	214,046.8	5,706.0	11,953.6	24,688.8
Nuclear Regulatory Commission	780.0	0.0	0.0	0.0	0.0	0.0	0.0	780.0	0.0	0.0
Smithsonian Institution	236,440.0	236,440.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.**Note(s):**

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 28

Preliminary federal obligations for basic research, by agency and performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
All agencies	41,755,263.7	7,935,419.5	3,542,305.1	553,390.2	19,635,289.9	4,261,592.7	3,888,989.6	1,576,471.2	117,864.7	243,941.1
Departments										
Department of Agriculture	1,182,931.5	788,049.6	3,021.9	0.0	369,523.9	0.0	18,978.3	0.0	2,238.9	1,118.8
Agricultural Research Service	707,000.0	652,641.4	0.0	0.0	47,744.4	0.0	5,364.7	0.0	130.7	1,118.8
Animal and Plant Health Inspection Service	18,856.0	13,555.1	0.0	0.0	5,300.9	0.0	0.0	0.0	0.0	0.0
Forest Service	86,075.5	81,307.2	0.0	0.0	2,594.6	0.0	230.4	0.0	1,943.4	0.0
National Institute of Food and Agriculture	371,000.0	40,545.9	3,021.9	0.0	313,884.0	0.0	13,383.2	0.0	164.9	0.0
Department of Commerce	261,901.9	244,971.1	6,002.8	0.0	8,399.5	0.0	1,703.9	522.0	0.0	302.6
National Institute of Standards and Technology	261,901.9	244,971.1	6,002.8	0.0	8,399.5	0.0	1,703.9	522.0	0.0	302.6
Department of Defense	2,564,726.7	575,521.4	380,802.9	14,073.5	1,381,210.2	7,935.6	95,329.8	27,371.6	2,726.9	79,754.8
Defense Advanced Research Projects Agency	481,562.0	14,963.0	139,332.9	8,752.6	244,359.8	6,012.2	41,430.4	7,781.7	0.0	18,929.4
Department of the Air Force	503,429.8	88,283.6	54,573.9	135.6	326,682.6	185.2	3,102.5	1,003.7	0.0	29,462.8
Department of the Army	550,851.8	177,314.4	73,087.8	0.0	264,967.1	213.6	13,518.5	10,878.2	2,115.8	8,756.4
Department of the Navy	637,091.0	177,722.8	21,431.1	97.2	380,600.5	317.4	33,916.1	850.2	611.1	21,544.7
Other defense agencies	391,792.1	117,237.5	92,377.2	5,088.2	164,600.3	1,207.3	3,362.4	6,857.8	0.0	1,061.5
Department of Education	58,656.1	2,802.6	590.7	0.0	42,123.2	0.0	13,139.6	0.0	0.0	0.0
Department of Energy	5,482,587.4	505,105.1	253,356.4	263,725.6	856,316.9	2,061,083.1	11,555.7	1,501,397.0	30,047.6	0.0
Electricity Delivery and Energy Reliability	15,404.0	352.1	1,015.1	3,592.0	1,826.9	1,542.9	1,076.7	5,950.7	47.6	0.0
Fossil Energy	34,000.0	0.0	0.0	0.0	34,000.0	0.0	0.0	0.0	0.0	0.0
National Nuclear Security Administration	106,658.4	0.0	1,646.3	60,759.6	13,750.0	5,214.0	0.0	25,288.6	0.0	0.0
Office of Defense Nuclear Nonproliferation	106,658.4	0.0	1,646.3	60,759.6	13,750.0	5,214.0	0.0	25,288.6	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	1,605.0	0.0	1,605.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Science	5,324,920.0	504,753.0	249,090.0	199,374.1	806,740.0	2,054,326.2	10,479.0	1,470,157.7	30,000.0	0.0

Preliminary federal obligations for basic research, by agency and performer: FY 2020

[illegible]

TABLE 28

Preliminary federal obligations for basic research, by agency and performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
National Aeronautics and Space Administration	5,259,592.0	761,985.8	1,566,387.3	1,946.6	770,357.7	1,870,461.0	258,079.4	21,929.0	1,772.4	6,672.7
National Science Foundation	5,342,150.0	36,270.9	246,123.7	0.0	4,486,193.6	310,768.3	219,388.4	5,848.4	12,251.9	25,304.9
Nuclear Regulatory Commission	795.7	0.0	0.0	0.0	0.0	0.0	0.0	795.7	0.0	0.0
Smithsonian Institution	241,440.0	241,440.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.**Note(s):**

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 29

Federal obligations for basic research, by detailed field of science and engineering: FYs 2019–20

(Dollars in thousands)

Field	2019	2020 (preliminary)
All fields	40,017,257.6	41,755,263.7
Computer sciences and mathematics	2,305,943.3	2,474,181.4
Computer sciences	1,150,707.7	NA
Mathematics	1,038,831.0	NA
Other computer sciences and mathematics	116,404.6	NA
Engineering	3,617,951.0	3,811,540.5
Aeronautical engineering	70,949.6	NA
Astronautical engineering	8,686.5	NA
Chemical engineering	74,877.7	NA
Civil engineering	11,536.3	NA
Electrical engineering	219,453.2	NA
Mechanical engineering	103,411.3	NA
Metallurgy and materials engineering	1,223,084.2	NA
Other engineering	1,905,952.2	NA
Environmental sciences	3,251,794.3	2,922,334.9
Atmospheric sciences	513,747.1	NA
Geological sciences	200,334.2	NA
Oceanography	432,082.4	NA
Other environmental sciences	2,105,630.6	NA
Life sciences	18,880,552.1	20,206,451.5
Agricultural sciences	634,606.2	NA
Biological sciences (excluding environmental biology)	9,785,751.9	NA
Environmental biology	490,197.1	NA
Medical sciences	6,389,200.5	NA
Other life sciences	1,580,796.4	NA
Physical sciences	7,906,958.5	7,716,064.7
Astronomy	1,577,197.0	NA
Chemistry	691,292.9	NA
Physics	2,570,637.8	NA
Other physical sciences	3,067,830.8	NA
Psychology	1,366,066.7	1,471,698.9
Biological aspects	16,077.3	NA
Social aspects	10,599.7	NA
Other psychological sciences	1,339,389.7	NA
Social sciences	451,215.9	428,870.1
Anthropology	32,658.3	NA
Economics	85,678.7	NA
Political science	10,281.0	NA
Sociology	36,650.4	NA
Other social sciences	285,947.5	NA
Other sciences nec	2,236,775.9	2,724,121.8

NA = not available; data were not collected at that level for that fiscal year.

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 30

Federal obligations for basic research, by agency and field of science and engineering: FY 2019

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
All agencies	40,017,257.6	2,305,943.3	3,617,951.0	3,251,794.3	18,880,552.1	7,906,958.5	1,366,066.7	451,215.9	2,236,775.9
Departments									
Department of Agriculture	1,056,543.3	885.4	29,181.9	7,723.5	927,224.9	49,382.2	0.0	42,145.5	0.0
Agricultural Research Service	646,187.1	840.0	5,815.7	2,843.2	593,652.1	41,485.2	0.0	1,550.8	0.0
Animal and Plant Health Inspection Service	18,812.2	0.0	0.0	0.0	18,812.2	0.0	0.0	0.0	0.0
Forest Service	84,664.4	45.3	4,522.2	3,089.8	64,567.0	3,074.3	0.0	9,365.8	0.0
National Institute of Food and Agriculture	306,879.6	0.0	18,844.0	1,790.5	250,193.6	4,822.7	0.0	31,228.9	0.0
Department of Commerce	253,176.4	13,035.1	23,920.1	0.0	11,515.6	187,421.5	0.0	0.0	17,284.0
National Institute of Standards and Technology	253,176.4	13,035.1	23,920.1	0.0	11,515.6	187,421.5	0.0	0.0	17,284.0
Department of Defense	2,510,170.5	576,390.3	687,996.3	105,751.2	296,691.6	383,510.3	36,752.6	35,155.5	387,922.6
Defense Advanced Research Projects Agency	478,318.0	251,682.5	66,877.5	0.0	95,339.1	61,480.2	0.0	0.0	2,938.8
Department of the Air Force	559,429.2	92,935.5	164,844.9	7,097.7	41,738.6	191,705.0	850.2	11,991.1	48,266.2
Department of the Army	494,668.0	74,728.7	39,376.6	4,671.8	98,512.5	37,744.0	17,703.6	2,370.2	219,560.5
Department of the Navy	655,662.5	78,125.4	293,709.1	87,759.4	28,912.8	43,291.9	13,690.3	7,096.8	103,076.8
Other defense agencies	322,092.8	78,918.2	123,188.2	6,222.2	32,188.7	49,289.2	4,508.5	13,697.4	14,080.4
Department of Education	57,276.0	0.0	0.0	0.0	0.0	0.0	0.0	57,276.0	0.0
Department of Energy	5,074,534.1	687,098.1	931,142.2	306,753.0	435,319.5	2,203,554.5	0.0	0.0	510,666.7
Electricity Delivery and Energy Reliability	14,649.0	0.0	14,649.0	0.0	0.0	0.0	0.0	0.0	0.0
Fossil Energy	33,000.0	0.0	0.0	0.0	0.0	33,000.0	0.0	0.0	0.0
National Nuclear Security Administration	101,820.0	4,118.7	200.0	1,846.5	908.0	94,696.7	0.0	0.0	50.0
Office of Defense Nuclear Nonproliferation	101,820.0	4,118.7	200.0	1,846.5	908.0	94,696.7	0.0	0.0	50.0
Office of Cybersecurity, Energy Security, and Emergency Response	989.0	0.0	989.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Science	4,924,076.1	682,979.4	915,304.2	304,906.5	434,411.5	2,075,857.8	0.0	0.0	510,616.7
Department of Health and Human Services	19,099,834.2	88,869.5	1,102,387.4	213,778.9	15,796,219.4	45,600.3	1,247,598.6	58,395.2	546,984.8
Centers for Disease Control and Prevention	77,206.4	0.0	0.0	37,561.2	17,590.6	0.0	0.0	220.0	21,834.6
Health Resources and Services Administration	2,627.8	0.0	0.0	0.0	2,627.8	0.0	0.0	0.0	0.0

TABLE 30

Federal obligations for basic research, by agency and field of science and engineering: FY 2019

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
National Institutes of Health	19,020,000.0	88,869.5	1,102,387.4	176,217.6	15,776,001.0	45,600.3	1,247,598.6	58,175.2	525,150.3
Department of Homeland Security	46,283.8	435.5	24,746.0	7,650.9	0.0	804.9	0.0	0.0	12,646.5
Countering Weapons of Mass Destruction Office	5,376.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,376.7
Science and Technology Directorate	40,907.1	435.5	24,746.0	7,650.9	0.0	804.9	0.0	0.0	7,269.8
Department of Housing and Urban Development	39,078.9	0.0	1,159.2	0.0	0.0	0.0	0.0	36,206.1	1,713.6
Department of the Interior	81,447.2	0.0	182.9	69,022.6	12,081.1	0.0	0.0	160.6	0.0
Bureau of Land Management	867.0	0.0	0.0	0.0	867.0	0.0	0.0	0.0	0.0
Bureau of Safety and Environmental Enforcement	182.9	0.0	182.9	0.0	0.0	0.0	0.0	0.0	0.0
National Park Service	857.3	0.0	0.0	464.6	232.1	0.0	0.0	160.6	0.0
U.S. Geological Survey	79,540.0	0.0	0.0	68,558.0	10,982.0	0.0	0.0	0.0	0.0
Department of Justice	21,228.1	0.0	0.0	0.0	280.0	0.0	1,436.1	19,512.0	0.0
Office of Justice Programs	21,228.1	0.0	0.0	0.0	280.0	0.0	1,436.1	19,512.0	0.0
Department of the Treasury	10,298.9	0.0	13.9	0.0	0.0	10,285.0	0.0	0.0	0.0
Bureau of Engraving and Printing	10,285.0	0.0	0.0	0.0	0.0	10,285.0	0.0	0.0	0.0
U.S. Mint	13.9	0.0	13.9	0.0	0.0	0.0	0.0	0.0	0.0
Department of Veterans Affairs	629,101.4	0.0	18,873.0	0.0	566,191.2	0.0	44,037.1	0.0	0.0
Other agencies									
National Aeronautics and Space Administration	5,688,975.1	0.0	0.0	1,623,128.6	43,610.2	4,008,909.2	0.0	0.0	13,327.1
National Science Foundation	5,212,090.0	939,229.3	798,347.9	908,478.7	689,943.6	967,499.5	36,242.3	190,794.0	681,554.6
Nuclear Regulatory Commission	780.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	780.0
Smithsonian Institution	236,440.0	0.0	0.0	9,507.0	101,475.0	49,991.0	0.0	11,571.0	63,896.0

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 31

Preliminary federal obligations for basic research, by agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
All agencies	41,755,263.7	2,474,181.4	3,811,540.5	2,922,334.9	20,206,451.5	7,716,064.7	1,471,698.9	428,870.1	2,724,121.8
Departments									
Department of Agriculture	1,182,931.5	964.4	35,586.1	8,434.4	1,034,522.8	54,185.6	0.0	49,238.1	0.0
Agricultural Research Service	707,000.0	919.1	6,363.0	3,110.8	649,520.9	45,389.4	0.0	1,696.8	0.0
Animal and Plant Health Inspection Service	18,856.0	0.0	0.0	0.0	18,856.0	0.0	0.0	0.0	0.0
Forest Service	86,075.5	45.3	4,628.4	3,144.3	65,609.8	3,125.5	0.0	9,522.1	0.0
National Institute of Food and Agriculture	371,000.0	0.0	24,594.7	2,179.3	300,536.1	5,670.6	0.0	38,019.3	0.0
Department of Commerce	261,901.9	20,670.1	25,757.5	0.0	11,475.8	186,774.1	0.0	0.0	17,224.3
National Institute of Standards and Technology	261,901.9	20,670.1	25,757.5	0.0	11,475.8	186,774.1	0.0	0.0	17,224.3
Department of Defense	2,564,726.7	610,220.9	661,544.4	104,372.3	306,704.5	389,749.7	49,002.7	34,983.0	408,149.1
Defense Advanced Research Projects Agency	481,562.0	253,389.4	67,331.0	0.0	95,985.7	61,897.2	0.0	0.0	2,958.7
Department of the Air Force	503,429.8	84,518.0	149,372.6	6,431.5	37,821.1	172,968.0	770.7	7,812.0	43,735.9
Department of the Army	550,851.8	83,216.3	43,849.0	5,202.4	109,701.4	42,030.9	19,714.4	2,639.5	244,497.9
Department of the Navy	637,091.0	75,912.5	285,389.9	85,273.7	28,093.8	42,065.7	13,302.5	6,895.7	100,157.1
Other defense agencies	391,792.1	113,184.7	115,601.9	7,464.7	35,102.6	70,787.9	15,215.1	17,635.9	16,799.4
Department of Education	58,656.1	0.0	0.0	0.0	0.0	0.0	0.0	952.4	57,703.7
Department of Energy	5,482,587.4	783,400.9	1,041,422.0	31,281.0	447,501.0	2,312,158.6	0.0	0.0	866,824.0
Electricity Delivery and Energy Reliability	15,404.0	0.0	15,404.0	0.0	0.0	0.0	0.0	0.0	0.0
Fossil Energy	34,000.0	0.0	0.0	0.0	0.0	34,000.0	0.0	0.0	0.0
National Nuclear Security Administration	106,658.4	7,135.9	1,139.0	2,281.0	447.0	95,655.6	0.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	106,658.4	7,135.9	1,139.0	2,281.0	447.0	95,655.6	0.0	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	1,605.0	0.0	1,605.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Science	5,324,920.0	776,265.0	1,023,274.0	29,000.0	447,054.0	2,182,503.0	0.0	0.0	866,824.0
Department of Health and Human Services	20,477,268.2	95,256.7	1,181,617.9	226,366.5	16,942,174.0	48,877.7	1,337,265.6	62,576.3	583,133.3
Centers for Disease Control and Prevention	87,906.2	0.0	0.0	37,483.8	29,962.8	0.0	0.0	220.0	20,239.6
Health Resources and Services Administration	2,362.0	0.0	0.0	0.0	2,362.0	0.0	0.0	0.0	0.0

TABLE 31

Preliminary federal obligations for basic research, by agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
National Institutes of Health	20,387,000.0	95,256.7	1,181,617.9	188,882.7	16,909,849.3	48,877.7	1,337,265.6	62,356.3	562,893.7
Department of Homeland Security	45,280.0	1,000.0	23,000.0	8,000.0	0.0	1,000.0	0.0	0.0	12,280.0
Countering Weapons of Mass Destruction Office	4,280.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4,280.0
Science and Technology Directorate	41,000.0	1,000.0	23,000.0	8,000.0	0.0	1,000.0	0.0	0.0	8,000.0
Department of Housing and Urban Development	57,874.8	0.0	3,943.5	0.0	0.0	0.0	0.0	51,932.5	1,998.7
Department of the Interior	83,937.8	0.0	228.4	70,515.5	13,034.9	0.0	0.0	159.0	0.0
Bureau of Land Management	867.0	0.0	0.0	0.0	867.0	0.0	0.0	0.0	0.0
Bureau of Safety and Environmental Enforcement	228.4	0.0	228.4	0.0	0.0	0.0	0.0	0.0	0.0
National Park Service	865.9	0.0	0.0	477.1	229.8	0.0	0.0	159.0	0.0
U.S. Geological Survey	81,976.6	0.0	0.0	70,038.5	11,938.1	0.0	0.0	0.0	0.0
Department of Justice	21,652.6	0.0	0.0	0.0	285.6	0.0	1,464.8	19,902.2	0.0
Office of Justice Programs	21,652.6	0.0	0.0	0.0	285.6	0.0	1,464.8	19,902.2	0.0
Department of the Treasury	5,625.1	0.0	104.1	0.0	0.0	5,521.0	0.0	0.0	0.0
Bureau of Engraving and Printing	5,521.0	0.0	0.0	0.0	0.0	5,521.0	0.0	0.0	0.0
U.S. Mint	104.1	0.0	104.1	0.0	0.0	0.0	0.0	0.0	0.0
Department of Veterans Affairs	668,843.9	0.0	20,065.3	0.0	601,959.5	0.0	46,819.1	0.0	0.0
Other agencies									
National Aeronautics and Space Administration	5,259,592.0	0.0	0.0	1,531,707.8	38,256.8	3,676,163.1	0.0	0.0	13,464.3
National Science Foundation	5,342,150.0	962,668.3	818,271.2	931,150.3	707,161.5	991,644.0	37,146.8	195,555.4	698,552.6
Nuclear Regulatory Commission	795.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	795.7
Smithsonian Institution	241,440.0	0.0	0.0	10,507.0	103,375.0	49,991.0	0.0	13,571.0	63,996.0

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 32

Federal obligations for basic research in computer sciences and mathematics, by agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Computer sciences	Mathematics	Other computer sciences and mathematics
All agencies	2,305,943.3	1,150,707.7	1,038,831.0	116,404.6
Departments				
Department of Agriculture	885.4	870.4	15.0	0.0
Agricultural Research Service	840.0	840.0	0.0	0.0
Forest Service	45.3	30.3	15.0	0.0
Department of Commerce	13,035.1	1,882.0	1,766.4	9,386.7
National Institute of Standards and Technology	13,035.1	1,882.0	1,766.4	9,386.7
Department of Defense	576,390.3	387,976.1	85,515.0	102,899.2
Defense Advanced Research Projects Agency	251,682.5	194,320.0	3,701.6	53,660.9
Department of the Air Force	92,935.5	21,517.1	34,316.1	37,102.4
Department of the Army	74,728.7	64,284.9	10,443.8	0.0
Department of the Navy	78,125.4	60,363.7	17,303.3	458.3
Other defense agencies	78,918.2	47,490.4	19,750.3	11,677.6
Department of Energy	687,098.1	52,382.0	630,597.4	4,118.7
National Nuclear Security Administration	4,118.7	0.0	0.0	4,118.7
Office of Defense Nuclear Nonproliferation	4,118.7	0.0	0.0	4,118.7
Office of Science	682,979.4	52,382.0	630,597.4	0.0
Department of Health and Human Services	88,869.5	0.0	88,869.5	0.0
National Institutes of Health	88,869.5	0.0	88,869.5	0.0
Department of Homeland Security	435.5	435.5	0.0	0.0
Science and Technology Directorate	435.5	435.5	0.0	0.0
Other agencies				
National Science Foundation	939,229.3	707,161.8	232,067.6	0.0

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 33

Federal obligations for basic research in engineering, by agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Aeronautical engineering	Astronautical engineering	Chemical engineering	Civil engineering	Electrical engineering	Mechanical engineering	Metallurgy and materials engineering	Other engineering
All agencies	3,617,951.0	70,949.6	8,686.5	74,877.7	11,536.3	219,453.2	103,411.3	1,223,084.2	1,905,952.2
Departments									
Department of Agriculture	29,181.9	0.0	0.0	55.0	0.0	0.0	0.0	0.0	29,126.9
Agricultural Research Service	5,815.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,815.7
Forest Service	4,522.2	0.0	0.0	55.0	0.0	0.0	0.0	0.0	4,467.2
National Institute of Food and Agriculture	18,844.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18,844.0
Department of Commerce	23,920.1	0.0	0.0	123.7	0.0	7,798.1	93.6	11,558.8	4,345.9
National Institute of Standards and Technology	23,920.1	0.0	0.0	123.7	0.0	7,798.1	93.6	11,558.8	4,345.9
Department of Defense	687,996.3	70,949.6	8,686.5	16,946.8	7,486.0	98,245.1	52,180.3	119,162.4	314,339.6
Defense Advanced Research Projects Agency	66,877.5	0.0	0.0	2,735.3	0.0	36,220.1	0.0	0.0	27,922.1
Department of the Air Force	164,844.9	42,275.2	4,425.0	7,579.9	90.1	9,790.3	2,925.7	47,242.1	50,516.7
Department of the Army	39,376.6	3,773.4	0.0	0.0	707.5	6,007.9	12,361.9	15,532.2	993.7
Department of the Navy	293,709.1	17,785.5	0.0	700.0	0.0	10,403.6	7,201.0	38,341.7	219,277.4
Other defense agencies	123,188.2	7,115.4	4,261.5	5,931.6	6,688.4	35,823.3	29,691.8	18,046.5	15,629.7
Department of Energy	931,142.2	0.0	0.0	8,193.9	0.0	17,083.8	1,150.0	902,675.6	2,039.0
Electricity Delivery and Energy Reliability	14,649.0	0.0	0.0	0.0	0.0	14,649.0	0.0	0.0	0.0
National Nuclear Security Administration	200.0	0.0	0.0	140.0	0.0	60.0	0.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	200.0	0.0	0.0	140.0	0.0	60.0	0.0	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	989.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	989.0
Office of Science	915,304.2	0.0	0.0	8,053.9	0.0	2,374.8	1,150.0	902,675.6	1,050.0
Department of Health and Human Services	1,102,387.4	0.0	0.0	0.0	0.0	0.0	0.0	8,531.1	1,093,856.3
National Institutes of Health	1,102,387.4	0.0	0.0	0.0	0.0	0.0	0.0	8,531.1	1,093,856.3

TABLE 33

Federal obligations for basic research in engineering, by agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Aeronautical engineering	Astronautical engineering	Chemical engineering	Civil engineering	Electrical engineering	Mechanical engineering	Metallurgy and materials engineering	Other engineering
Department of Homeland Security	24,746.0	0.0	0.0	271.0	0.0	3,883.5	0.0	0.0	20,591.6
Science and Technology Directorate	24,746.0	0.0	0.0	271.0	0.0	3,883.5	0.0	0.0	20,591.6
Department of Housing and Urban Development	1,159.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,159.2
Department of the Interior	182.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	182.9
Bureau of Safety and Environmental Enforcement	182.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	182.9
Department of the Treasury	13.9	0.0	0.0	0.0	0.0	0.0	0.0	13.9	0.0
U.S. Mint	13.9	0.0	0.0	0.0	0.0	0.0	0.0	13.9	0.0
Department of Veterans Affairs	18,873.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18,873.0
Other agencies									
National Science Foundation	798,347.9	0.0	0.0	49,287.4	4,050.3	92,442.7	49,987.4	181,142.2	421,437.8

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 34

Federal obligations for basic research in environmental sciences, by agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Atmospheric sciences	Geological sciences	Oceanography	Other environmental sciences
All agencies	3,251,794.3	513,747.1	200,334.2	432,082.4	2,105,630.6
Departments					
Department of Agriculture	7,723.5	6,700.4	64.6	0.0	958.5
Agricultural Research Service	2,843.2	2,778.6	64.6	0.0	0.0
Forest Service	3,089.8	2,131.3	0.0	0.0	958.5
National Institute of Food and Agriculture	1,790.5	1,790.5	0.0	0.0	0.0
Department of Defense	105,751.2	3,935.9	1,877.6	91,006.4	8,931.3
Department of the Air Force	7,097.7	2,052.0	65.3	0.0	4,980.4
Department of the Army	4,671.8	0.0	720.9	0.0	3,950.9
Department of the Navy	87,759.4	0.0	0.0	87,759.4	0.0
Other defense agencies	6,222.2	1,883.9	1,091.4	3,247.0	0.0
Department of Energy	306,753.0	204,877.8	2,468.3	0.0	99,406.8
National Nuclear Security Administration	1,846.5	209.5	1,637.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	1,846.5	209.5	1,637.0	0.0	0.0
Office of Science	304,906.5	204,668.3	831.3	0.0	99,406.8
Department of Health and Human Services	213,778.9	0.0	0.0	0.0	213,778.9
Centers for Disease Control and Prevention	37,561.2	0.0	0.0	0.0	37,561.2
National Institutes of Health	176,217.6	0.0	0.0	0.0	176,217.6
Department of Homeland Security	7,650.9	0.0	0.0	3,791.5	3,859.4
Science and Technology Directorate	7,650.9	0.0	0.0	3,791.5	3,859.4
Department of the Interior	69,022.6	0.0	2,440.0	0.0	66,582.6
National Park Service	464.6	0.0	0.0	0.0	464.6
U.S. Geological Survey	68,558.0	0.0	2,440.0	0.0	66,118.0
Other agencies					
National Aeronautics and Space Administration	1,623,128.6	0.0	0.0	0.0	1,623,128.6
National Science Foundation	908,478.7	298,233.0	184,944.7	336,316.5	88,984.5
Smithsonian Institution	9,507.0	0.0	8,539.0	968.0	0.0

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 35

Federal obligations for basic research in life sciences, by agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Agricultural sciences	Biological sciences (excluding environmental biology)	Environmental biology	Medical sciences	Other life sciences
All agencies	18,880,552.1	634,606.2	9,785,751.9	490,197.1	6,389,200.5	1,580,796.4
Departments						
Department of Agriculture	927,224.9	628,839.3	111,444.9	174,448.4	12,459.8	32.5
Agricultural Research Service	593,652.1	461,183.7	41,356.0	80,579.5	10,532.9	0.0
Animal and Plant Health Inspection Service	18,812.2	18,812.2	0.0	0.0	0.0	0.0
Forest Service	64,567.0	14,160.2	6,367.1	44,007.2	0.0	32.5
National Institute of Food and Agriculture	250,193.6	134,683.1	63,721.8	49,861.7	1,927.0	0.0
Department of Commerce	11,515.6	0.0	11,515.6	0.0	0.0	0.0
National Institute of Standards and Technology	11,515.6	0.0	11,515.6	0.0	0.0	0.0
Department of Defense	296,691.6	5,544.6	135,879.7	14,476.1	120,511.8	20,279.5
Defense Advanced Research Projects Agency	95,339.1	0.0	62,867.3	14,458.4	18,013.4	0.0
Department of the Air Force	41,738.6	3,660.7	24,714.9	17.7	64.0	13,281.4
Department of the Army	98,512.5	0.0	5,448.5	0.0	88,397.5	4,666.5
Department of the Navy	28,912.8	0.0	14,184.7	0.0	14,037.0	691.1
Other defense agencies	32,188.7	1,883.9	28,664.2	0.0	0.0	1,640.6
Department of Energy	435,319.5	222.4	398,177.9	36,919.3	0.0	0.0
National Nuclear Security Administration	908.0	0.0	213.0	695.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	908.0	0.0	213.0	695.0	0.0	0.0
Office of Science	434,411.5	222.4	397,964.9	36,224.3	0.0	0.0
Department of Health and Human Services	15,796,219.4	0.0	8,590,817.6	0.0	5,690,037.6	1,515,364.2
Centers for Disease Control and Prevention	17,590.6	0.0	11,659.2	0.0	5,931.4	0.0
Health Resources and Services Administration	2,627.8	0.0	0.0	0.0	2,627.8	0.0
National Institutes of Health	15,776,001.0	0.0	8,579,158.4	0.0	5,681,478.4	1,515,364.2
Department of the Interior	12,081.1	0.0	6,052.5	6,028.5	0.0	0.0
Bureau of Land Management	867.0	0.0	0.0	867.0	0.0	0.0
National Park Service	232.1	0.0	232.1	0.0	0.0	0.0
U.S. Geological Survey	10,982.0	0.0	5,820.5	5,161.5	0.0	0.0
Department of Justice	280.0	0.0	0.0	0.0	0.0	280.0
Office of Justice Programs	280.0	0.0	0.0	0.0	0.0	280.0
Department of Veterans Affairs	566,191.2	0.0	0.0	0.0	566,191.2	0.0
Other agencies						
National Aeronautics and Space Administration	43,610.2	0.0	0.0	0.0	0.0	43,610.2
National Science Foundation	689,943.6	0.0	526,796.7	163,146.8	0.0	0.0
Smithsonian Institution	101,475.0	0.0	5,067.0	95,178.0	0.0	1,230.0

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 36

Federal obligations for basic research in physical sciences, by agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Astronomy	Chemistry	Physics	Other physical sciences
All agencies	7,906,958.5	1,577,197.0	691,292.9	2,570,637.8	3,067,830.8
Departments					
Department of Agriculture	49,382.2	0.0	47,831.3	1,550.8	0.0
Agricultural Research Service	41,485.2	0.0	39,934.4	1,550.8	0.0
Forest Service	3,074.3	0.0	3,074.3	0.0	0.0
National Institute of Food and Agriculture	4,822.7	0.0	4,822.7	0.0	0.0
Department of Commerce	187,421.5	0.0	23,008.9	163,612.5	800.1
National Institute of Standards and Technology	187,421.5	0.0	23,008.9	163,612.5	800.1
Department of Defense	383,510.3	147.8	73,464.4	265,011.3	44,886.8
Defense Advanced Research Projects Agency	61,480.2	0.0	14,946.5	46,533.7	0.0
Department of the Air Force	191,705.0	147.8	16,409.0	166,378.3	8,769.9
Department of the Army	37,744.0	0.0	16,106.1	18,146.5	3,491.5
Department of the Navy	43,291.9	0.0	5,768.9	6,325.3	31,197.8
Other defense agencies	49,289.2	0.0	20,233.9	27,627.6	1,427.7
Department of Energy	2,203,554.5	0.0	260,896.1	1,885,050.6	57,607.8
Fossil Energy	33,000.0	0.0	33,000.0	0.0	0.0
National Nuclear Security Administration	94,696.7	0.0	7,345.3	29,743.6	57,607.8
Office of Defense Nuclear Nonproliferation	94,696.7	0.0	7,345.3	29,743.6	57,607.8
Office of Science	2,075,857.8	0.0	220,550.9	1,855,307.0	0.0
Department of Health and Human Services	45,600.3	0.0	45,031.2	0.0	569.1
National Institutes of Health	45,600.3	0.0	45,031.2	0.0	569.1
Department of Homeland Security	804.9	0.0	699.4	0.0	105.5
Science and Technology Directorate	804.9	0.0	699.4	0.0	105.5
Department of the Treasury	10,285.0	0.0	0.0	0.0	10,285.0
Bureau of Engraving and Printing	10,285.0	0.0	0.0	0.0	10,285.0
Other agencies					
National Aeronautics and Space Administration	4,008,909.2	1,270,677.3	0.0	0.0	2,738,231.9
National Science Foundation	967,499.5	256,380.8	240,361.5	255,412.7	215,344.6
Smithsonian Institution	49,991.0	49,991.0	0.0	0.0	0.0

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 37

Federal obligations for basic research in psychology, by agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Biological aspects	Social aspects	Other psychological sciences
All agencies	1,366,066.7	16,077.3	10,599.7	1,339,389.7
Departments				
Department of Defense	36,752.6	4,929.4	2,266.9	29,556.3
Department of the Air Force	850.2	0.0	386.7	463.5
Department of the Army	17,703.6	0.0	0.0	17,703.6
Department of the Navy	13,690.3	3,049.3	0.0	10,641.0
Other defense agencies	4,508.5	1,880.1	1,880.2	748.2
Department of Health and Human Services	1,247,598.6	0.0	0.0	1,247,598.6
National Institutes of Health	1,247,598.6	0.0	0.0	1,247,598.6
Department of Justice	1,436.1	0.0	886.8	549.3
Office of Justice Programs	1,436.1	0.0	886.8	549.3
Department of Veterans Affairs	44,037.1	0.0	0.0	44,037.1
Other agencies				
National Science Foundation	36,242.3	11,148.0	7,445.9	17,648.4

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 38

Federal obligations for basic research in social sciences, by agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Anthropology	Economics	Political science	Sociology	Other social sciences
All agencies	451,215.9	32,658.3	85,678.7	10,281.0	36,650.4	285,947.5
Departments						
Department of Agriculture	42,145.5	0.0	30,256.2	0.0	11,817.1	72.2
Agricultural Research Service	1,550.8	0.0	1,550.8	0.0	0.0	0.0
Forest Service	9,365.8	0.0	6,293.9	0.0	2,999.7	72.2
National Institute of Food and Agriculture	31,228.9	0.0	22,411.4	0.0	8,817.4	0.0
Department of Defense	35,155.5	0.0	0.0	0.0	0.0	35,155.5
Department of the Air Force	11,991.1	0.0	0.0	0.0	0.0	11,991.1
Department of the Army	2,370.2	0.0	0.0	0.0	0.0	2,370.2
Department of the Navy	7,096.8	0.0	0.0	0.0	0.0	7,096.8
Other defense agencies	13,697.4	0.0	0.0	0.0	0.0	13,697.4
Department of Education	57,276.0	0.0	0.0	0.0	0.0	57,276.0
Department of Health and Human Services	58,395.2	0.0	0.0	0.0	0.0	58,395.2
Centers for Disease Control and Prevention	220.0	0.0	0.0	0.0	0.0	220.0
National Institutes of Health	58,175.2	0.0	0.0	0.0	0.0	58,175.2
Department of Housing and Urban Development	36,206.1	0.0	30,359.4	0.0	2,194.3	3,652.4
Department of the Interior	160.6	0.0	0.0	0.0	0.0	160.6
National Park Service	160.6	0.0	0.0	0.0	0.0	160.6
Department of Justice	19,512.0	782.2	0.0	0.0	8,668.9	10,060.9
Office of Justice Programs	19,512.0	782.2	0.0	0.0	8,668.9	10,060.9
Other agencies						
National Science Foundation	190,794.0	20,305.1	25,063.1	10,281.0	13,970.1	121,174.8
Smithsonian Institution	11,571.0	11,571.0	0.0	0.0	0.0	0.0

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 39

Federal obligations for applied research, by agency and performer: FY 2019

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
All agencies	41,100,526.5	11,057,883.9	7,102,283.8	3,110,922.2	13,754,525.4	462,695.6	4,166,897.2	792,779.4	414,375.0	238,164.1
Departments										
Department of Agriculture	1,350,427.2	736,540.7	29,441.9	0.0	558,674.3	0.0	19,655.4	0.0	4,822.0	1,292.9
Agricultural Marketing Service	3,855.3	3,855.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agricultural Research Service	516,949.7	458,967.2	0.0	0.0	50,927.4	0.0	5,722.4	0.0	139.4	1,193.4
Economic Research Service	85,626.4	73,922.6	5,724.1	0.0	3,680.9	0.0	2,236.5	0.0	8.8	53.5
Forest Service	170,325.6	147,919.5	416.3	0.0	15,163.2	0.0	2,266.2	0.0	4,514.4	46.0
National Agricultural Statistics Service	5,263.0	4,775.7	0.0	0.0	253.4	0.0	233.9	0.0	0.0	0.0
National Institute of Food and Agriculture	564,494.8	47,100.5	23,301.5	0.0	487,536.9	0.0	6,396.5	0.0	159.5	0.0
Rural Business-Cooperative Service	3,912.5	0.0	0.0	0.0	1,112.5	0.0	2,800.0	0.0	0.0	0.0
Department of Commerce	1,028,763.0	703,005.7	32,427.6	0.0	246,922.4	2,495.2	22,188.1	18,680.9	1,955.9	1,087.2
National Institute of Standards and Technology	449,790.2	361,935.1	28,994.8	0.0	37,378.3	0.0	1,609.9	18,680.9	108.0	1,083.2
National Oceanic and Atmospheric Administration	541,827.6	303,925.4	3,432.8	0.0	209,544.1	2,495.2	20,578.3	0.0	1,847.9	4.0
National Telecommunications and Information Administration	7,900.0	7,900.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Census Bureau	29,245.2	29,245.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Defense	5,758,234.9	2,032,353.9	2,477,065.4	47,672.9	788,048.4	79,785.5	251,557.4	49,983.5	1,115.0	30,653.0
Defense Advanced Research Projects Agency	1,264,987.0	66,316.8	742,346.4	16,653.4	315,029.0	20,632.2	73,125.0	12,558.7	650.0	17,675.6
Department of the Air Force	1,547,457.8	811,187.5	587,689.5	2,074.8	109,588.0	2,004.0	29,829.0	4,620.1	465.0	0.0
Department of the Army	1,461,518.3	548,516.1	718,770.5	601.9	115,522.7	2,581.5	69,509.1	3,671.5	0.0	2,344.9
Department of the Navy	935,022.4	354,736.0	280,243.3	6,208.7	213,029.1	1,388.0	60,725.1	8,750.7	0.0	9,941.5
Other defense agencies	549,249.3	251,597.4	148,015.7	22,134.0	34,879.6	53,179.8	18,369.2	20,382.5	0.0	691.0
Department of Education	131,380.1	5,563.9	3,807.6	0.0	84,357.9	0.0	36,471.3	0.0	1,179.5	0.0
Department of Energy	6,295,185.2	705,892.2	1,513,376.3	2,801,571.0	428,308.8	185,140.0	58,000.6	591,592.5	10,885.7	418.3

TABLE 39

Federal obligations for applied research, by agency and performer: FY 2019

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Advanced Research Projects Agency—Energy	202,477.3	0.0	85,594.9	10,582.8	81,578.5	5,374.4	6,974.3	12,372.3	0.0	0.0
Electricity Delivery and Energy Reliability	72,345.0	1,653.9	4,767.5	16,869.7	8,580.1	7,246.1	5,056.9	27,947.4	223.4	0.0
Energy Efficiency and Renewable Energy	1,270,334.0	0.0	296,261.5	95,576.8	307,763.4	134,636.1	0.0	425,483.8	10,612.4	0.0
Environmental Management	8,622.8	0.0	2,178.2	1,725.9	4,644.5	74.2	0.0	0.0	0.0	0.0
Fossil Energy	626,000.0	601,000.0	0.0	13,000.0	0.0	10,000.0	0.0	2,000.0	0.0	0.0
National Nuclear Security Administration	3,568,301.2	98,430.8	902,370.8	2,478,166.3	975.0	7,284.5	45,969.3	35,054.6	50.0	0.0
Defense Programs	3,434,107.1	98,430.8	889,424.3	2,394,696.0	975.0	950.0	45,969.3	3,661.7	0.0	0.0
Office of Defense Nuclear Nonproliferation	134,194.1	0.0	12,946.5	83,470.3	0.0	6,334.5	0.0	31,392.8	50.0	0.0
Nuclear Energy	378,272.7	1,158.8	78,666.7	174,361.7	21,267.3	20,524.6	0.0	81,875.3	0.0	418.3
Office of Cybersecurity, Energy Security, and Emergency Response	39,033.2	29.1	17,357.2	11,287.7	3,500.0	0.0	0.0	6,859.2	0.0	0.0
Office of Science	129,799.0	3,619.6	126,179.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Health and Human Services	19,254,566.8	3,992,910.8	1,086,451.5	240,424.2	10,589,653.7	9,967.4	2,969,048.2	15,470.1	208,675.7	141,965.2
Administration for Children and Families	2,254.8	205.0	0.0	0.0	0.0	0.0	2,049.8	0.0	0.0	0.0
Administration for Community Living	65,922.4	0.0	200.0	0.0	53,478.7	0.0	11,935.6	0.0	308.1	0.0
Agency for Healthcare Research and Quality	308,145.0	46,928.1	130,303.0	0.0	100,708.7	0.0	30,110.2	0.0	95.0	0.0
Agency for Toxic Substances and Disease Registry	7,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7,000.0	0.0
Centers for Disease Control and Prevention	288,660.1	105,841.7	23,841.0	0.0	90,717.2	0.0	25,790.1	0.0	22,466.7	20,003.4
Centers for Medicare and Medicaid Services	133,488.6	0.0	0.0	0.0	11,554.7	0.0	0.0	*	121,933.9	0.0
Food and Drug Administration	493,052.5	360,481.0	11,457.7	0.0	72,300.0	0.0	39,658.4	0.0	2,103.5	7,052.0

TABLE 39

Federal obligations for applied research, by agency and performer: FY 2019

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Health Resources and Services Administration	29,998.0	1,596.3	0.0	0.0	24,027.6	0.0	4,374.1	0.0	0.0	0.0
National Institutes of Health	17,909,000.0	3,475,106.5	915,104.2	240,424.2	10,234,721.2	9,967.4	2,848,528.2	15,470.1	54,768.4	114,909.8
Office of the Secretary of Health and Human Services	17,045.5	2,752.2	5,545.7	0.0	2,145.7	0.0	6,601.9	0.0	0.0	0.0
Office of the Assistant Secretary for Planning and Evaluation	17,045.5	2,752.2	5,545.7	0.0	2,145.7	0.0	6,601.9	0.0	0.0	0.0
Department of Homeland Security	233,243.0	83,899.2	115,766.2	6,053.7	2,355.7	4,381.6	2,182.7	16,072.1	0.0	2,531.9
Countering Weapons of Mass Destruction Office	25,817.5	1,776.8	11,717.6	3,404.1	226.0	4,048.2	0.0	4,345.8	0.0	299.0
Cybersecurity and Infrastructure Security Agency	13,126.0	1,683.6	1,857.8	2,649.6	1,173.8	333.3	880.0	4,548.0	0.0	0.0
Science and Technology Directorate	188,444.5	76,863.2	100,484.6	0.0	852.8	0.0	1,302.7	6,708.3	0.0	2,232.9
U.S. Coast Guard	5,855.0	3,575.5	1,706.3	0.0	103.2	0.0	0.0	470.0	0.0	0.0
Department of Housing and Urban Development	21,918.6	16,170.3	3,515.4	0.0	619.0	0.0	1,613.9	0.0	0.0	0.0
Department of the Interior	608,302.9	510,765.6	16,815.8	0.0	46,199.8	320.0	1,489.4	200.0	29,721.5	2,790.8
Bureau of Indian Affairs	5,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,000.0	0.0
Bureau of Land Management	12,857.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12,857.0	0.0
Bureau of Ocean Energy Management	65,080.0	43,853.5	11,330.7	0.0	6,824.4	0.0	234.9	0.0	111.8	2,724.8
Bureau of Reclamation	16,514.0	13,710.0	1,500.0	0.0	784.0	320.0	0.0	200.0	0.0	0.0
Bureau of Safety and Environmental Enforcement	7,365.0	2,052.3	3,722.5	0.0	747.4	0.0	168.0	0.0	608.7	66.0
National Park Service	9,272.4	0.0	26.9	0.0	9,148.5	0.0	96.9	0.0	0.0	0.0
Office of Surface Mining Reclamation and Enforcement	327.5	327.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Fish and Wildlife Service	32,650.0	32,650.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Geological Survey	459,237.0	418,172.3	235.7	0.0	28,695.5	0.0	989.6	0.0	11,143.9	0.0

Federal obligations for applied research, by agency and performer: FY 2019

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Department of Justice	84,168.4	4,151.3	17,642.8	0.0	37,538.3	0.0	23,912.0	0.0	923.9	0.0
Bureau of Prisons	1,249.0	957.0	0.0	0.0	0.0	0.0	0.0	0.0	292.0	0.0
Federal Bureau of Investigation	998.4	0.0	998.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Justice Programs	81,920.9	3,194.3	16,644.3	0.0	37,538.3	0.0	23,912.0	0.0	631.9	0.0
Department of Labor	4,366.1	3,309.5	1,056.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Employee Benefits Security Administration	2,642.1	1,585.5	1,056.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Occupational Safety and Health Administration	1,724.0	1,724.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of State	62,200.0	62,200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Transportation	745,596.2	146,191.9	249,740.2	0.0	145,378.3	265.0	47,791.6	4,121.9	151,672.6	434.7
Federal Aviation Administration	193,114.6	66,032.6	78,966.2	0.0	27,781.7	0.0	18,474.3	1,859.8	0.0	0.0
Federal Highway Administration	414,879.6	53,095.2	92,951.0	0.0	92,638.1	0.0	24,022.7	500.0	151,672.6	0.0
Federal Motor Carrier Safety Administration	7,766.4	5,600.7	1,271.0	0.0	729.7	0.0	165.0	0.0	0.0	0.0
Federal Railroad Administration	31,936.1	4,094.4	20,556.8	0.0	4,470.6	0.0	2,379.6	0.0	0.0	434.7
Federal Transit Administration	2,750.0	0.0	0.0	0.0	0.0	0.0	2,750.0	0.0	0.0	0.0
National Highway Traffic Safety Administration	76,323.0	9,258.2	51,511.8	0.0	14,238.9	265.0	0.0	1,049.2	0.0	0.0
Office of the Secretary of Transportation	8,210.9	3,210.9	0.0	0.0	5,000.0	0.0	0.0	0.0	0.0	0.0
Pipeline and Hazardous Materials Safety Administration	10,615.6	4,899.8	4,483.5	0.0	519.3	0.0	0.0	713.0	0.0	0.0
Department of the Treasury	35,878.8	163.8	35,715.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bureau of Engraving and Printing	35,715.0	0.0	35,715.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Mint	163.8	163.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 39

Federal obligations for applied research, by agency and performer: FY 2019

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Department of Veterans Affairs	848,504.3	777,452.5	0.0	0.0	0.0	0.0	0.0	71,051.9	0.0	0.0
Other agencies										
Administrative Office of the U.S. Courts	6,448.3	0.0	0.0	0.0	0.0	0.0	0.0	6,448.3	0.0	0.0
Agency for International Development	171,713.9	16,127.0	12,564.1	0.0	51,524.7	0.0	44,991.3	0.0	0.0	46,506.8
Appalachian Regional Commission	898.9	0.0	254.7	0.0	500.0	0.0	144.2	0.0	0.0	0.0
Consumer Product Safety Commission	856.3	856.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Environmental Protection Agency	404,784.0	208,000.8	143,585.1	472.3	51,832.0	679.1	0.0	214.7	0.0	0.0
Federal Communications Commission	2,005.3	2,005.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Federal Trade Commission	6,003.2	6,003.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Library of Congress	867.6	867.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	2,422,519.2	920,611.8	1,112,147.4	2,321.9	168,879.3	175,667.5	29,581.4	5,147.1	1,566.4	6,596.4
National Archives and Records Administration	511.0	391.2	0.0	0.0	119.8	0.0	0.0	0.0	0.0	0.0
National Science Foundation	784,050.0	1,273.7	163,108.1	0.0	541,756.1	0.0	75,715.3	0.0	1,833.8	363.0
Nuclear Regulatory Commission	74,076.6	30,267.8	8,819.9	12,406.3	590.0	3,994.3	772.9	13,796.5	0.0	3,429.0
Patient-Centered Outcomes Research Trust Fund	578,430.5	0.0	0.0	0.0	0.0	0.0	578,430.5	0.0	0.0	0.0
Social Security Administration	146,241.0	90,908.0	42,597.0	0.0	9,267.0	0.0	3,351.0	0.0	23.0	95.0
Tennessee Valley Authority	5,614.0	0.0	5,614.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Agency for Global Media	6,107.0	0.0	6,107.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Postal Service	26,664.2	0.0	24,664.2	0.0	2,000.0	0.0	0.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50.

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.

Note(s):
Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):
National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 40

Preliminary federal obligations for applied research, by agency and performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
All agencies	43,507,176.5	11,529,819.4	7,290,441.5	3,661,107.4	14,754,275.6	468,359.2	4,288,840.2	859,716.3	385,791.1	268,825.7
Departments										
Department of Agriculture	1,506,354.8	806,821.7	33,963.5	0.0	640,258.5	0.0	19,593.1	0.0	4,776.9	941.0
Agricultural Marketing Service	3,476.3	3,476.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agricultural Research Service	565,600.0	522,113.1	0.0	0.0	38,195.5	0.0	4,291.8	0.0	104.5	895.0
Economic Research Service	85,257.0	73,633.0	5,700.0	0.0	3,680.0	0.0	2,235.0	0.0	9.0	0.0
Foreign Agricultural Service	500.0	0.0	0.0	0.0	500.0	0.0	0.0	0.0	0.0	0.0
Forest Service	173,164.4	150,758.3	416.3	0.0	15,163.2	0.0	2,266.2	0.0	4,514.4	46.0
National Agricultural Statistics Service	5,407.9	4,779.5	0.0	0.0	249.3	0.0	379.2	0.0	0.0	0.0
National Institute of Food and Agriculture	669,000.0	52,061.5	27,847.2	0.0	581,321.4	0.0	7,620.9	0.0	149.0	0.0
Rural Business-Cooperative Service	3,949.2	0.0	0.0	0.0	1,149.2	0.0	2,800.0	0.0	0.0	0.0
Department of Commerce	1,108,527.7	733,352.0	54,264.2	0.0	288,628.9	2,500.7	4,637.0	19,052.1	4,366.6	1,726.0
National Institute of Standards and Technology	486,034.6	367,017.0	42,368.5	0.0	49,881.2	0.0	3,180.3	19,052.1	2,819.8	1,715.6
National Oceanic and Atmospheric Administration	575,822.0	319,664.0	11,895.7	0.0	238,747.7	2,500.7	1,456.8	0.0	1,546.7	10.4
National Telecommunications and Information Administration	8,180.0	8,180.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Census Bureau	38,491.0	38,491.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Defense	5,900,212.4	2,009,419.8	2,576,796.7	53,688.2	832,795.7	85,149.6	258,039.6	47,881.8	1,277.3	35,163.7
Defense Advanced Research Projects Agency	1,513,218.0	79,330.3	888,018.6	19,921.3	376,847.8	24,680.9	87,474.4	15,023.1	777.6	21,144.1
Department of the Air Force	1,661,346.3	869,144.1	631,630.4	2,230.0	117,781.8	2,153.9	32,059.2	4,965.5	499.7	881.7
Department of the Army	1,261,958.7	473,620.3	620,627.7	519.7	99,749.4	2,229.0	60,017.7	3,170.2	0.0	2,024.8
Department of the Navy	909,697.8	345,858.3	273,470.8	6,406.1	206,995.1	1,348.7	59,005.1	8,129.6	0.0	8,484.1
Other defense agencies	553,991.6	241,466.8	163,049.3	24,611.1	31,421.6	54,737.2	19,483.1	16,593.4	0.0	2,629.2
Department of Education	132,645.0	5,604.7	4,575.2	0.0	87,821.8	0.0	34,086.6	250.0	306.8	0.0
Department of Energy	7,199,120.3	773,173.2	1,553,653.2	3,337,078.1	591,771.8	222,653.7	52,735.0	654,877.3	13,178.0	0.0

TABLE 40

Preliminary federal obligations for applied research, by agency and performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Advanced Research Projects Agency—Energy	212,500.0	0.0	89,831.9	11,106.7	85,616.7	5,640.5	7,319.6	12,984.8	0.0	0.0
Electricity Delivery and Energy Reliability	67,881.0	1,551.8	4,473.4	15,828.8	8,050.7	6,799.0	4,744.9	26,222.9	209.6	0.0
Energy Efficiency and Renewable Energy	1,546,376.0	0.0	360,638.8	116,345.6	374,640.0	163,892.4	0.0	517,940.8	12,918.4	0.0
Environmental Management	3,818.1	0.0	1,054.4	808.5	1,584.0	198.0	0.0	173.3	0.0	0.0
Fossil Energy	646,000.0	605,000.0	0.0	13,000.0	0.0	9,000.0	0.0	19,000.0	0.0	0.0
National Nuclear Security Administration	4,264,122.2	165,666.0	909,652.7	3,028,861.2	80,360.0	6,862.0	39,670.5	32,999.7	50.0	0.0
Defense Programs	4,131,021.0	155,666.0	905,334.5	2,948,100.0	80,360.0	390.0	39,670.5	1,500.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	133,101.2	10,000.0	4,318.3	80,761.2	0.0	6,472.0	0.0	31,499.7	50.0	0.0
Nuclear Energy	435,425.1	925.4	177,034.1	145,127.4	41,520.5	25,261.8	0.0	45,555.8	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	22,998.0	30.0	10,968.0	6,000.0	0.0	5,000.0	1,000.0	0.0	0.0	0.0
Department of Health and Human Services	20,265,691.5	4,177,325.6	1,120,118.7	254,211.4	11,179,160.1	11,467.6	3,138,014.3	16,357.2	213,422.2	155,614.3
Administration for Children and Families	1,575.0	575.0	0.0	0.0	0.0	0.0	1,000.0	0.0	0.0	0.0
Administration for Community Living	71,822.2	0.0	199.9	0.0	52,282.0	0.0	18,967.8	0.0	372.5	0.0
Agency for Healthcare Research and Quality	308,145.0	48,270.0	131,483.0	0.0	98,720.2	0.0	29,580.0	0.0	91.8	0.0
Agency for Toxic Substances and Disease Registry	7,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7,000.0	0.0
Centers for Disease Control and Prevention	263,989.5	88,142.4	3,851.3	0.0	96,298.0	928.6	25,797.1	0.0	21,937.0	27,035.2
Centers for Medicare and Medicaid Services	136,000.0	0.0	0.0	0.0	12,000.0	0.0	0.0	0.0	124,000.0	0.0
Food and Drug Administration	495,000.0	361,904.8	11,502.9	0.0	72,585.6	0.0	39,815.0	0.0	2,111.8	7,079.8
Health Resources and Services Administration	29,159.8	1,293.1	0.0	0.0	23,492.6	0.0	4,374.1	0.0	0.0	0.0

Preliminary federal obligations for applied research, by agency and performer: FY 2020

[illegible]

TABLE 40

Preliminary federal obligations for applied research, by agency and performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							Foreign
			United States and U.S. territories							
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Administrative Office of the U.S. Courts	7,671.6	0.0	0.0	0.0	0.0	0.0	0.0	7,671.6	0.0	0.0
Agency for International Development	171,713.9	16,127.0	12,564.1	0.0	52,524.7	0.0	44,991.3	0.0	0.0	45,506.8
Consumer Product Safety Commission	200.0	200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Environmental Protection Agency	411,906.4	190,545.7	169,718.7	0.0	51,642.0	0.0	0.0	0.0	0.0	0.0
Federal Communications Commission	1,800.0	1,800.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Federal Trade Commission	7,324.8	7,324.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Library of Congress	1,114.3	1,114.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	2,355,696.2	986,054.2	992,092.9	1,959.8	205,463.9	136,801.7	22,896.5	4,476.4	654.7	5,296.2
National Science Foundation	814,415.0	1,323.0	169,421.2	0.0	562,740.8	0.0	78,648.1	0.0	1,904.8	377.1
Nuclear Regulatory Commission	64,490.4	31,281.9	8,000.8	10,233.0	559.6	2,422.8	69.2	11,000.3	0.0	922.9
Patient-Centered Outcomes Research Trust Fund	540,670.0	0.0	0.0	0.0	0.0	0.0	540,670.0	0.0	0.0	0.0
Social Security Administration	131,774.0	62,988.0	55,355.0	0.0	10,271.0	0.0	3,160.0	0.0	0.0	0.0
Tennessee Valley Authority	5,880.0	0.0	5,880.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Agency for Global Media	6,198.0	0.0	6,198.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Postal Service	26,595.0	0.0	24,595.0	0.0	2,000.0	0.0	0.0	0.0	0.0	0.0

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.**Note(s):**

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 41

Federal obligations for applied research, by detailed field of science and engineering: FYs 2019–20

(Dollars in thousands)

Field	2019	2020 (preliminary)
All fields	41,100,526.5	43,507,176.5
Computer sciences and mathematics	2,024,030.2	2,266,099.4
Computer sciences	1,746,089.6	NA
Mathematics	118,086.1	NA
Other computer sciences and mathematics	159,854.5	NA
Engineering	11,661,360.2	12,605,872.6
Aeronautical engineering	1,128,215.4	NA
Astronautical engineering	820,974.5	NA
Chemical engineering	379,215.4	NA
Civil engineering	554,753.9	NA
Electrical engineering	751,156.5	NA
Mechanical engineering	526,731.2	NA
Metallurgy and materials engineering	619,747.1	NA
Other engineering	6,880,565.9	NA
Environmental sciences	1,822,909.7	1,855,955.5
Atmospheric sciences	310,499.8	NA
Geological sciences	38,808.7	NA
Oceanography	387,135.1	NA
Other environmental sciences	1,086,466.1	NA
Life sciences	19,423,110.3	20,458,931.1
Agricultural sciences	810,912.7	NA
Biological sciences (excluding environmental biology)	9,124,634.1	NA
Environmental biology	433,990.3	NA
Medical sciences	7,385,577.2	NA
Other life sciences	1,667,996.0	NA
Physical sciences	1,909,174.4	1,891,581.1
Astronomy	6,220.8	NA
Chemistry	434,164.6	NA
Physics	875,339.8	NA
Other physical sciences	593,449.1	NA
Psychology	1,387,487.3	1,461,250.9
Biological aspects	1,445.9	NA
Social aspects	42,140.4	NA
Other psychological sciences	1,343,901.0	NA
Social sciences	704,456.9	589,385.6
Anthropology	2,290.1	NA
Economics	209,229.3	NA
Political science	3,905.3	NA
Sociology	187,366.3	NA
Other social sciences	301,665.9	NA
Other sciences nec	2,167,997.4	2,378,100.3

NA = not available; data were not collected at that level for that fiscal year.

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 42

Federal obligations for applied research, by agency and field of science and engineering: FY 2019

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
All agencies	41,100,526.5	2,024,030.2	11,661,360.2	1,822,909.7	19,423,110.3	1,909,174.4	1,387,487.3	704,456.9	2,167,997.4
Departments									
Department of Agriculture	1,350,427.2	7,048.1	45,367.8	10,439.7	1,070,191.7	44,573.4	0.0	172,806.6	0.0
Agricultural Marketing Service	3,855.3	0.0	0.0	0.0	3,855.3	0.0	0.0	0.0	0.0
Agricultural Research Service	516,949.7	672.0	4,652.5	2,274.6	474,921.7	33,188.2	0.0	1,240.7	0.0
Economic Research Service	85,626.4	0.0	0.0	0.0	0.0	0.0	0.0	85,626.4	0.0
Forest Service	170,325.6	1,113.0	5,740.5	4,842.0	129,330.1	2,434.2	0.0	26,865.9	0.0
National Agricultural Statistics Service	5,263.0	5,263.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Institute of Food and Agriculture	564,494.8	0.0	34,974.8	3,323.1	459,284.7	8,950.9	0.0	57,961.3	0.0
Rural Business-Cooperative Service	3,912.5	0.0	0.0	0.0	2,800.0	0.0	0.0	1,112.5	0.0
Department of Commerce	1,028,763.0	147,384.9	236,435.1	445,967.5	69,995.9	71,396.0	86.6	28,592.2	28,904.6
National Institute of Standards and Technology	449,790.2	136,861.3	219,981.1	6,948.1	21,376.5	51,130.0	86.6	583.2	12,823.3
National Oceanic and Atmospheric Administration	541,827.6	4,677.0	8,554.0	439,019.5	48,619.4	20,266.0	0.0	4,610.5	16,081.2
National Telecommunications and Information Administration	7,900.0	0.0	7,900.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Census Bureau	29,245.2	5,846.7	0.0	0.0	0.0	0.0	0.0	23,398.5	0.0
Department of Defense	5,758,234.9	1,180,475.8	2,462,064.2	146,381.9	523,065.0	429,632.0	66,763.4	5,673.2	944,179.4
Defense Advanced Research Projects Agency	1,264,987.0	688,924.3	295,411.2	27,354.3	174,270.1	65,106.1	0.0	0.0	13,921.0
Department of the Air Force	1,547,457.8	108,259.2	1,030,812.6	14,436.0	43,599.9	137,723.3	348.3	0.0	212,278.4
Department of the Army	1,461,518.3	162,132.1	666,416.7	9,017.7	226,309.3	4,885.9	55,132.8	0.0	337,623.7
Department of the Navy	935,022.4	134,999.4	353,375.1	95,078.9	18,077.9	33,952.3	11,271.3	3,090.2	285,177.4
Other defense agencies	549,249.3	86,160.8	116,048.6	495.0	60,807.8	187,964.4	11.0	2,583.0	95,178.8
Department of Education	131,380.1	0.0	0.0	0.0	0.0	0.0	0.0	131,380.1	0.0
Department of Energy	6,295,185.2	293,928.4	4,748,268.4	239,505.8	17,327.4	993,707.3	0.0	0.0	2,448.0
Advanced Research Projects Agency—Energy	202,477.3	20,788.8	125,171.4	0.0	14,400.0	42,117.1	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	72,345.0	0.0	72,345.0	0.0	0.0	0.0	0.0	0.0	0.0
Energy Efficiency and Renewable Energy	1,270,334.0	0.0	1,270,334.0	0.0	0.0	0.0	0.0	0.0	0.0
Environmental Management	8,622.8	0.0	0.0	8,622.8	0.0	0.0	0.0	0.0	0.0
Fossil Energy	626,000.0	0.0	300,000.0	226,000.0	0.0	100,000.0	0.0	0.0	0.0

TABLE 42

Federal obligations for applied research, by agency and field of science and engineering: FY 2019

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
National Nuclear Security Administration	3,568,301.2	256,380.3	2,483,409.7	2,646.5	71.0	825,743.7	0.0	0.0	50.0
Defense Programs	3,434,107.1	238,856.4	2,482,704.7	0.0	0.0	712,545.9	0.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	134,194.1	17,523.8	705.0	2,646.5	71.0	113,197.8	0.0	0.0	50.0
Nuclear Energy	378,272.7	0.0	378,272.7	0.0	0.0	0.0	0.0	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	39,033.2	0.0	39,033.2	0.0	0.0	0.0	0.0	0.0	0.0
Office of Science	129,799.0	16,759.4	79,702.4	2,236.4	2,856.3	25,846.4	0.0	0.0	2,398.0
Department of Health and Human Services	19,254,566.8	127,067.4	1,038,797.6	268,101.3	15,844,561.4	42,936.7	1,182,523.1	98,167.1	652,412.3
Administration for Children and Families	2,254.8	0.0	0.0	0.0	0.0	0.0	0.0	2,254.8	0.0
Administration for Community Living	65,922.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65,922.4
Agency for Healthcare Research and Quality	308,145.0	43,388.9	803.0	0.0	172,573.6	0.0	7,799.5	20,813.1	62,767.0
Agency for Toxic Substances and Disease Registry	7,000.0	0.0	0.0	7,000.0	0.0	0.0	0.0	0.0	0.0
Centers for Disease Control and Prevention	288,660.1	0.0	0.0	95,176.9	174,124.0	0.0	0.0	1,011.1	18,348.1
Centers for Medicare and Medicaid Services	133,488.6	0.0	0.0	0.0	133,488.6	0.0	0.0	0.0	0.0
Food and Drug Administration	493,052.5	0.0	0.0	0.0	493,052.5	0.0	0.0	0.0	0.0
Health Resources and Services Administration	29,998.0	0.0	0.0	0.0	16,832.6	0.0	0.0	2,265.5	10,899.8
National Institutes of Health	17,909,000.0	83,678.5	1,037,994.6	165,924.4	14,854,490.1	42,936.7	1,174,723.6	54,777.1	494,475.1
Office of the Secretary of Health and Human Services	17,045.5	0.0	0.0	0.0	0.0	0.0	0.0	17,045.5	0.0
Office of the Assistant Secretary for Planning and Evaluation	17,045.5	0.0	0.0	0.0	0.0	0.0	0.0	17,045.5	0.0
Department of Homeland Security	233,243.0	56,590.5	88,130.4	800.7	9,090.5	34,826.4	57.2	6,351.0	37,396.3
Countering Weapons of Mass Destruction Office	25,817.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25,817.5
Cybersecurity and Infrastructure Security Agency	13,126.0	5,028.3	1,450.0	0.0	0.0	798.0	0.0	5,849.7	0.0
Science and Technology Directorate	188,444.5	50,990.3	82,255.2	0.0	9,090.5	34,028.4	0.0	501.3	11,578.9
U.S. Coast Guard	5,855.0	571.9	4,425.2	800.7	0.0	0.0	57.2	0.0	0.0

TABLE 42

Federal obligations for applied research, by agency and field of science and engineering: FY 2019

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Department of Housing and Urban Development	21,918.6	0.0	744.4	0.0	0.0	0.0	0.0	14,833.6	6,340.7
Department of the Interior	608,302.9	3,538.5	11,496.0	392,640.4	190,899.2	241.7	0.0	8,762.1	724.9
Bureau of Indian Affairs	5,000.0	0.0	0.0	5,000.0	0.0	0.0	0.0	0.0	0.0
Bureau of Land Management	12,857.0	0.0	0.0	0.0	12,857.0	0.0	0.0	0.0	0.0
Bureau of Ocean Energy Management	65,080.0	3,538.5	0.0	52,581.6	0.0	0.0	0.0	8,235.0	724.9
Bureau of Reclamation	16,514.0	0.0	8,257.0	8,257.0	0.0	0.0	0.0	0.0	0.0
Bureau of Safety and Environmental Enforcement	7,365.0	0.0	3,239.0	4,125.9	0.0	0.0	0.0	0.0	0.0
National Park Service	9,272.4	0.0	0.0	4,254.4	4,249.2	241.7	0.0	527.1	0.0
Office of Surface Mining Reclamation and Enforcement	327.5	0.0	0.0	327.5	0.0	0.0	0.0	0.0	0.0
U.S. Fish and Wildlife Service	32,650.0	0.0	0.0	0.0	32,650.0	0.0	0.0	0.0	0.0
U.S. Geological Survey	459,237.0	0.0	0.0	318,094.0	141,143.0	0.0	0.0	0.0	0.0
Department of Justice	84,168.4	2,170.4	1,734.1	0.0	7,486.6	9,974.2	2,724.1	52,550.6	7,528.3
Bureau of Prisons	1,249.0	0.0	0.0	0.0	0.0	0.0	0.0	1,249.0	0.0
Federal Bureau of Investigation	998.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	998.4
Office of Justice Programs	81,920.9	2,170.4	1,734.1	0.0	7,486.6	9,974.2	2,724.1	51,301.6	6,529.8
Department of Labor	4,366.1	0.0	0.0	0.0	0.0	0.0	0.0	4,366.1	0.0
Employee Benefits Security Administration	2,642.1	0.0	0.0	0.0	0.0	0.0	0.0	2,642.1	0.0
Occupational Safety and Health Administration	1,724.0	0.0	0.0	0.0	0.0	0.0	0.0	1,724.0	0.0
Department of State	62,200.0	0.0	0.0	0.0	60,000.0	0.0	0.0	2,200.0	0.0
Department of Transportation	745,596.2	54,154.1	588,054.1	30,800.5	9,390.3	4,440.1	21,745.8	1,596.8	35,414.6
Federal Aviation Administration	193,114.6	31,726.6	107,862.7	16,427.7	9,390.3	0.0	21,745.8	0.0	5,961.6
Federal Highway Administration	414,879.6	0.0	414,879.6	0.0	0.0	0.0	0.0	0.0	0.0
Federal Motor Carrier Safety Administration	7,766.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7,766.4
Federal Railroad Administration	31,936.1	0.0	30,339.3	0.0	0.0	0.0	0.0	1,596.8	0.0
Federal Transit Administration	2,750.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,750.0
National Highway Traffic Safety Administration	76,323.0	22,427.5	21,132.1	14,372.8	0.0	0.0	0.0	0.0	18,390.6
Office of the Secretary of Transportation	8,210.9	0.0	8,210.9	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 42

Federal obligations for applied research, by agency and field of science and engineering: FY 2019

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Pipeline and Hazardous Materials Safety Administration	10,615.6	0.0	5,629.6	0.0	0.0	4,440.1	0.0	0.0	546.0
Department of the Treasury	35,878.8	0.0	163.8	0.0	0.0	35,715.0	0.0	0.0	0.0
Bureau of Engraving and Printing	35,715.0	0.0	0.0	0.0	0.0	35,715.0	0.0	0.0	0.0
U.S. Mint	163.8	0.0	163.8	0.0	0.0	0.0	0.0	0.0	0.0
Department of Veterans Affairs	848,504.3	0.0	45,054.1	0.0	618,811.2	0.0	113,587.2	0.0	71,051.9
Other agencies									
Administrative Office of the U.S. Courts	6,448.3	6,448.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agency for International Development	171,713.9	0.0	0.0	587.9	158,222.0	0.0	0.0	12,904.0	0.0
Appalachian Regional Commission	898.9	0.0	0.0	0.0	0.0	0.0	0.0	898.9	0.0
Consumer Product Safety Commission	856.3	0.0	0.0	817.0	0.0	39.3	0.0	0.0	0.0
Environmental Protection Agency	404,784.0	8,622.4	57,407.5	166,835.6	159,914.7	9,665.5	0.0	2,338.3	0.0
Federal Communications Commission	2,005.3	75.0	1,500.0	0.0	0.0	300.0	0.0	130.3	0.0
Federal Trade Commission	6,003.2	0.0	0.0	0.0	0.0	0.0	0.0	6,003.2	0.0
Library of Congress	867.6	0.0	0.0	0.0	0.0	867.6	0.0	0.0	0.0
National Aeronautics and Space Administration	2,422,519.2	4,175.2	1,916,816.7	112,860.6	100,085.4	219,324.5	0.0	0.0	69,256.7
National Archives and Records Administration	511.0	511.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Science Foundation	784,050.0	131,840.1	312,971.3	7,170.9	5,638.5	11,534.8	0.0	2,554.8	312,339.7
Nuclear Regulatory Commission	74,076.6	0.0	74,076.6	0.0	0.0	0.0	0.0	0.0	0.0
Patient-Centered Outcomes Research Trust Fund	578,430.5	0.0	0.0	0.0	578,430.5	0.0	0.0	0.0	0.0
Social Security Administration	146,241.0	0.0	0.0	0.0	0.0	0.0	0.0	146,241.0	0.0
Tennessee Valley Authority	5,614.0	0.0	5,614.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Agency for Global Media	6,107.0	0.0	0.0	0.0	0.0	0.0	0.0	6,107.0	0.0
U.S. Postal Service	26,664.2	0.0	26,664.2	0.0	0.0	0.0	0.0	0.0	0.0

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 43

Preliminary federal obligations for applied research, by agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
All agencies	43,507,176.5	2,266,099.4	12,605,872.6	1,855,955.5	20,458,931.1	1,891,581.1	1,461,250.9	589,385.6	2,378,100.3
Departments									
Department of Agriculture	1,506,354.8	7,216.2	55,585.1	9,762.3	1,200,650.8	49,073.6	0.0	184,066.8	0.0
Agricultural Marketing Service	3,476.3	0.0	0.0	0.0	3,476.3	0.0	0.0	0.0	0.0
Agricultural Research Service	565,600.0	735.3	5,090.4	2,488.6	519,616.7	36,311.5	0.0	1,357.4	0.0
Economic Research Service	85,257.0	0.0	0.0	0.0	0.0	0.0	0.0	85,257.0	0.0
Foreign Agricultural Service	500.0	0.0	0.0	0.0	500.0	0.0	0.0	0.0	0.0
Forest Service	173,164.4	1,073.0	5,876.8	3,320.1	133,088.2	2,474.8	0.0	27,331.5	0.0
National Agricultural Statistics Service	5,407.9	5,407.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Institute of Food and Agriculture	669,000.0	0.0	44,617.9	3,953.5	541,169.7	10,287.2	0.0	68,971.7	0.0
Rural Business-Cooperative Service	3,949.2	0.0	0.0	0.0	2,800.0	0.0	0.0	1,149.2	0.0
Department of Commerce	1,108,527.7	148,361.9	270,762.1	469,557.2	75,116.9	72,550.1	85.8	40,302.4	31,791.2
National Institute of Standards and Technology	486,034.6	139,486.3	253,288.1	6,886.4	21,186.8	50,676.1	85.8	578.0	13,847.1
National Oceanic and Atmospheric Administration	575,822.0	5,048.0	9,294.0	462,670.8	53,930.1	21,874.0	0.0	5,061.0	17,944.1
National Telecommunications and Information Administration	8,180.0	0.0	8,180.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Census Bureau	38,491.0	3,827.6	0.0	0.0	0.0	0.0	0.0	34,663.4	0.0
Department of Defense	5,900,212.4	1,305,042.5	2,456,535.7	149,409.6	569,158.2	386,456.4	58,943.2	5,188.6	969,478.1
Defense Advanced Research Projects Agency	1,513,218.0	824,113.3	353,380.4	32,722.0	208,467.5	77,882.0	0.0	0.0	16,652.7
Department of the Air Force	1,661,346.3	116,353.6	1,107,885.4	15,515.4	46,859.8	148,902.4	374.4	0.0	225,455.3
Department of the Army	1,261,958.7	139,994.2	575,422.4	7,786.4	195,408.5	4,218.8	47,604.8	0.0	291,523.7
Department of the Navy	909,697.8	131,787.2	343,913.9	92,385.8	17,565.9	32,990.6	10,952.0	3,002.6	277,099.8
Other defense agencies	553,991.6	92,794.3	75,933.6	1,000.0	100,856.5	122,462.6	12.0	2,186.0	158,746.6
Department of Education	132,645.0	0.0	0.0	0.0	0.0	0.0	0.0	7,888.7	124,756.3
Department of Energy	7,199,120.3	354,499.9	5,602,685.6	208,380.1	15,212.8	1,018,342.0	0.0	0.0	0.0
Advanced Research Projects Agency –Energy	212,500.0	21,817.8	131,367.5	0.0	15,112.8	44,201.9	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	67,881.0	0.0	67,881.0	0.0	0.0	0.0	0.0	0.0	0.0
Energy Efficiency and Renewable Energy	1,546,376.0	0.0	1,546,376.0	0.0	0.0	0.0	0.0	0.0	0.0
Environmental Management	3,818.1	0.0	0.0	3,818.1	0.0	0.0	0.0	0.0	0.0

TABLE 43

Preliminary federal obligations for applied research, by agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Fossil Energy	646,000.0	0.0	300,000.0	200,000.0	0.0	146,000.0	0.0	0.0	0.0
National Nuclear Security Administration	4,264,122.2	332,682.1	3,098,638.0	4,562.0	100.0	828,140.1	0.0	0.0	0.0
Defense Programs	4,131,021.0	316,642.0	3,086,050.0	0.0	0.0	728,329.0	0.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	133,101.2	16,040.1	12,588.0	4,562.0	100.0	99,811.1	0.0	0.0	0.0
Nuclear Energy	435,425.1	0.0	435,425.1	0.0	0.0	0.0	0.0	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	22,998.0	0.0	22,998.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Health and Human Services	20,265,691.5	131,865.9	1,098,321.9	277,462.1	16,684,191.9	45,777.0	1,249,888.1	98,837.0	679,347.6
Administration for Children and Families	1,575.0	0.0	0.0	0.0	0.0	0.0	0.0	1,575.0	0.0
Administration for Community Living	71,822.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71,822.2
Agency for Healthcare Research and Quality	308,145.0	43,388.9	803.0	0.0	172,573.6	0.0	7,799.5	20,813.1	62,767.0
Agency for Toxic Substances and Disease Registry	7,000.0	0.0	0.0	7,000.0	0.0	0.0	0.0	0.0	0.0
Centers for Disease Control and Prevention	263,989.5	0.0	0.0	95,022.8	157,669.3	378.0	0.0	342.0	10,577.4
Centers for Medicare and Medicaid Services	136,000.0	0.0	0.0	0.0	136,000.0	0.0	0.0	0.0	0.0
Food and Drug Administration	495,000.0	0.0	0.0	0.0	495,000.0	0.0	0.0	0.0	0.0
Health Resources and Services Administration	29,159.8	0.0	0.0	0.0	16,621.1	0.0	0.0	1,188.7	11,350.0
National Institutes of Health	18,936,000.0	88,477.1	1,097,518.9	175,439.4	15,706,327.8	45,398.9	1,242,088.7	57,918.3	522,831.0
Office of the Secretary of Health and Human Services	17,000.0	0.0	0.0	0.0	0.0	0.0	0.0	17,000.0	0.0
Office of the Assistant Secretary for Planning and Evaluation	17,000.0	0.0	0.0	0.0	0.0	0.0	0.0	17,000.0	0.0
Department of Homeland Security	187,657.5	51,315.2	63,688.8	208.9	8,000.0	24,793.0	13.9	11,896.3	27,741.5
Countering Weapons of Mass Destruction Office	19,741.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19,741.5
Cybersecurity and Infrastructure Security Agency	14,431.0	1,166.7	575.0	0.0	0.0	793.0	0.0	11,896.3	0.0
Science and Technology Directorate	152,000.0	50,000.0	62,000.0	0.0	8,000.0	24,000.0	0.0	0.0	8,000.0
U.S. Coast Guard	1,485.0	148.5	1,113.8	208.9	0.0	0.0	13.9	0.0	0.0

TABLE 43

Preliminary federal obligations for applied research, by agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Department of Housing and Urban Development	30,735.2	0.0	760.8	0.0	0.0	0.0	0.0	23,311.6	6,662.8
Department of the Interior	633,996.4	3,765.1	18,325.2	401,860.7	199,636.5	244.2	0.0	9,425.6	739.2
Bureau of Indian Affairs	5,000.0	0.0	0.0	5,000.0	0.0	0.0	0.0	0.0	0.0
Bureau of Land Management	12,856.0	0.0	0.0	0.0	12,856.0	0.0	0.0	0.0	0.0
Bureau of Ocean Energy Management	67,232.0	3,765.1	0.0	53,834.4	0.0	0.0	0.0	8,893.3	739.2
Bureau of Reclamation	17,500.0	0.0	8,750.0	8,750.0	0.0	0.0	0.0	0.0	0.0
Bureau of Safety and Environmental Enforcement	13,334.8	0.0	9,575.2	3,759.6	0.0	0.0	0.0	0.0	0.0
National Park Service	9,365.1	0.0	0.0	4,296.9	4,291.7	244.2	0.0	532.3	0.0
Office of Surface Mining Reclamation and Enforcement	510.0	0.0	0.0	510.0	0.0	0.0	0.0	0.0	0.0
U.S. Fish and Wildlife Service	32,650.0	0.0	0.0	0.0	32,650.0	0.0	0.0	0.0	0.0
U.S. Geological Survey	475,548.5	0.0	0.0	325,709.8	149,838.7	0.0	0.0	0.0	0.0
Department of Justice	68,905.5	2,213.9	1,768.8	0.0	7,636.3	10,173.7	2,778.6	36,670.2	7,664.1
Bureau of Prisons	1,276.0	0.0	0.0	0.0	0.0	0.0	0.0	1,276.0	0.0
Federal Bureau of Investigation	1,003.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,003.7
Office of Justice Programs	66,625.9	2,213.9	1,768.8	0.0	7,636.3	10,173.7	2,778.6	35,394.2	6,660.4
Department of Labor	4,652.0	0.0	0.0	0.0	0.0	0.0	0.0	4,652.0	0.0
Employee Benefits Security Administration	2,895.3	0.0	0.0	0.0	0.0	0.0	0.0	2,895.3	0.0
Occupational Safety and Health Administration	1,756.8	0.0	0.0	0.0	0.0	0.0	0.0	1,756.8	0.0
Department of State	62,300.0	0.0	0.0	0.0	60,000.0	0.0	0.0	2,300.0	0.0
Department of Transportation	913,281.4	104,618.1	641,664.1	43,672.5	13,480.7	16,391.4	28,778.4	1,612.2	63,064.0
Federal Aviation Administration	348,223.5	82,802.4	179,397.4	29,691.9	13,480.7	0.0	28,778.4	0.0	14,072.7
Federal Highway Administration	391,860.3	0.0	391,860.3	0.0	0.0	0.0	0.0	0.0	0.0
Federal Motor Carrier Safety Administration	11,102.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11,102.4
Federal Railroad Administration	32,243.4	0.0	30,631.2	0.0	0.0	0.0	0.0	1,612.2	0.0
Federal Transit Administration	20,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20,000.0
National Highway Traffic Safety Administration	74,240.7	21,815.6	20,555.5	13,980.6	0.0	0.0	0.0	0.0	17,888.9
Office of the Secretary of Transportation	15,112.7	0.0	15,112.7	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 43

Preliminary federal obligations for applied research, by agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Pipeline and Hazardous Materials Safety Administration	20,498.4	0.0	4,107.0	0.0	0.0	16,391.4	0.0	0.0	0.0
Department of the Treasury	43,979.2	0.0	71.5	0.0	0.0	43,907.7	0.0	0.0	0.0
Bureau of Engraving and Printing	43,907.7	0.0	0.0	0.0	0.0	43,907.7	0.0	0.0	0.0
U.S. Mint	71.5	0.0	71.5	0.0	0.0	0.0	0.0	0.0	0.0
Department of Veterans Affairs	901,667.9	0.0	47,900.3	0.0	657,903.7	0.0	120,762.9	0.0	75,101.1
Other agencies									
Administrative Office of the U.S. Courts	7,671.6	7,671.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agency for International Development	171,713.9	0.0	0.0	587.9	158,222.0	0.0	0.0	12,904.0	0.0
Consumer Product Safety Commission	200.0	0.0	0.0	150.0	0.0	50.0	0.0	0.0	0.0
Environmental Protection Agency	411,906.4	8,774.1	58,417.6	169,771.1	162,728.5	9,835.6	0.0	2,379.5	0.0
Federal Communications Commission	1,800.0	300.0	1,050.0	0.0	0.0	450.0	0.0	0.0	0.0
Federal Trade Commission	7,324.8	0.0	0.0	0.0	0.0	0.0	0.0	7,324.8	0.0
Library of Congress	1,114.3	0.0	0.0	0.0	0.0	1,114.3	0.0	0.0	0.0
National Aeronautics and Space Administration	2,355,696.2	3,508.1	1,866,276.0	117,684.4	100,465.9	200,440.5	0.0	0.0	67,321.3
National Science Foundation	814,415.0	136,946.9	325,094.0	7,448.7	5,856.9	11,981.6	0.0	2,653.8	324,433.3
Nuclear Regulatory Commission	64,490.4	0.0	64,490.4	0.0	0.0	0.0	0.0	0.0	0.0
Patient-Centered Outcomes Research Trust Fund	540,670.0	0.0	0.0	0.0	540,670.0	0.0	0.0	0.0	0.0
Social Security Administration	131,774.0	0.0	0.0	0.0	0.0	0.0	0.0	131,774.0	0.0
Tennessee Valley Authority	5,880.0	0.0	5,880.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Agency for Global Media	6,198.0	0.0	0.0	0.0	0.0	0.0	0.0	6,198.0	0.0
U.S. Postal Service	26,595.0	0.0	26,595.0	0.0	0.0	0.0	0.0	0.0	0.0

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 44

Federal obligations for applied research in computer sciences and mathematics, by agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Computer sciences	Mathematics	Other computer sciences and mathematics
All agencies	2,024,030.2	1,746,089.6	118,086.1	159,854.5
Departments				
Department of Agriculture	7,048.1	1,695.0	5,353.0	0.0
Agricultural Research Service	672.0	672.0	0.0	0.0
Forest Service	1,113.0	1,023.0	90.0	0.0
National Agricultural Statistics Service	5,263.0	0.0	5,263.0	0.0
Department of Commerce	147,384.9	135,856.4	8,137.4	3,391.1
National Institute of Standards and Technology	136,861.3	134,080.4	149.6	2,631.3
National Oceanic and Atmospheric Administration	4,677.0	1,559.0	3,118.0	0.0
U.S. Census Bureau	5,846.7	217.0	4,869.8	759.8
Department of Defense	1,180,475.8	1,037,626.1	8,189.8	134,659.9
Defense Advanced Research Projects Agency	688,924.3	628,070.7	0.0	60,853.6
Department of the Air Force	108,259.2	73,018.3	2,865.1	32,375.8
Department of the Army	162,132.1	128,885.5	0.0	33,246.6
Department of the Navy	134,999.4	129,980.5	3,524.7	1,494.2
Other defense agencies	86,160.8	77,671.1	1,800.0	6,689.7
Department of Energy	293,928.4	277,204.6	0.0	16,723.8
Advanced Research Projects Agency—Energy	20,788.8	20,788.8	0.0	0.0
National Nuclear Security Administration	256,380.3	239,656.4	0.0	16,723.8
Defense Programs	238,856.4	238,856.4	0.0	0.0
Office of Defense Nuclear Nonproliferation	17,523.8	800.0	0.0	16,723.8
Office of Science	16,759.4	16,759.4	0.0	0.0
Department of Health and Human Services	127,067.4	34,988.8	92,078.6	0.0
Agency for Healthcare Research and Quality	43,388.9	34,988.8	8,400.1	0.0
National Institutes of Health	83,678.5	0.0	83,678.5	0.0
Department of Homeland Security	56,590.5	56,487.4	0.0	103.2
Cybersecurity and Infrastructure Security Agency	5,028.3	5,028.3	0.0	0.0
Science and Technology Directorate	50,990.3	50,990.3	0.0	0.0
U.S. Coast Guard	571.9	468.7	0.0	103.2
Department of the Interior	3,538.5	3,538.5	0.0	0.0
Bureau of Ocean Energy Management	3,538.5	3,538.5	0.0	0.0
Department of Justice	2,170.4	1,326.1	844.4	0.0
Office of Justice Programs	2,170.4	1,326.1	844.4	0.0
Department of Transportation	54,154.1	54,154.1	0.0	0.0
Federal Aviation Administration	31,726.6	31,726.6	0.0	0.0
National Highway Traffic Safety Administration	22,427.5	22,427.5	0.0	0.0
Other agencies				
Administrative Office of the U.S. Courts	6,448.3	6,448.3	0.0	0.0
Environmental Protection Agency	8,622.4	4,743.0	3,078.2	801.3
Federal Communications Commission	75.0	75.0	0.0	0.0
National Aeronautics and Space Administration	4,175.2	0.0	0.0	4,175.2
National Archives and Records Administration	511.0	511.0	0.0	0.0
National Science Foundation	131,840.1	131,435.5	404.7	0.0

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 45

Federal obligations for applied research in engineering, by agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Aeronautical engineering	Astronautical engineering	Chemical engineering	Civil engineering	Electrical engineering	Mechanical engineering	Metallurgy and materials engineering	Other engineering
Other agencies									
Environmental Protection Agency	57,407.5	0.0	0.0	20,873.3	2,409.6	0.0	685.5	519.3	32,919.8
Federal Communications Commission	1,500.0	0.0	0.0	0.0	0.0	1,500.0	0.0	0.0	0.0
National Aeronautics and Space Administration	1,916,816.7	546,257.7	733,048.0	0.0	0.0	4,480.5	0.0	16,318.6	616,711.9
National Science Foundation	312,971.3	0.0	0.0	12,764.8	977.6	20,921.1	12,461.2	2,345.5	263,501.0
Nuclear Regulatory Commission	74,076.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	74,076.6
Tennessee Valley Authority	5,614.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,614.0
U.S. Postal Service	26,664.2	0.0	0.0	0.0	0.0	15,038.6	11,625.6	0.0	0.0

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 46

Federal obligations for applied research in environmental sciences, by agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Atmospheric sciences	Geological sciences	Oceanography	Other environmental sciences
All agencies	1,822,909.7	310,499.8	38,808.7	387,135.1	1,086,466.1
Departments					
Department of Agriculture	10,439.7	7,739.0	51.7	0.0	2,649.0
Agricultural Research Service	2,274.6	2,222.9	51.7	0.0	0.0
Forest Service	4,842.0	2,193.0	0.0	0.0	2,649.0
National Institute of Food and Agriculture	3,323.1	3,323.1	0.0	0.0	0.0
Department of Commerce	445,967.5	195,366.6	649.5	226,014.5	23,937.0
National Institute of Standards and Technology	6,948.1	6,751.6	196.5	0.0	0.0
National Oceanic and Atmospheric Administration	439,019.5	188,615.0	453.0	226,014.5	23,937.0
Department of Defense	146,381.9	28,523.9	8.4	107,812.8	10,036.7
Defense Advanced Research Projects Agency	27,354.3	12,775.1	0.0	14,579.2	0.0
Department of the Air Force	14,436.0	14,247.9	8.4	0.0	179.8
Department of the Army	9,017.7	1,500.9	0.0	0.0	7,516.7
Department of the Navy	95,078.9	0.0	0.0	92,738.7	2,340.2
Other defense agencies	495.0	0.0	0.0	495.0	0.0
Department of Energy	239,505.8	2,445.9	2,437.0	0.0	234,622.8
Environmental Management	8,622.8	0.0	0.0	0.0	8,622.8
Fossil Energy	226,000.0	0.0	0.0	0.0	226,000.0
National Nuclear Security Administration	2,646.5	209.5	2,437.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	2,646.5	209.5	2,437.0	0.0	0.0
Office of Science	2,236.4	2,236.4	0.0	0.0	0.0
Department of Health and Human Services	268,101.3	0.0	0.0	0.0	268,101.3
Agency for Toxic Substances and Disease Registry	7,000.0	0.0	0.0	0.0	7,000.0
Centers for Disease Control and Prevention	95,176.9	0.0	0.0	0.0	95,176.9
National Institutes of Health	165,924.4	0.0	0.0	0.0	165,924.4
Department of Homeland Security	800.7	0.0	0.0	0.0	800.7
U.S. Coast Guard	800.7	0.0	0.0	0.0	800.7
Department of the Interior	392,640.4	1,321.6	32,680.8	39,172.2	319,465.9
Bureau of Indian Affairs	5,000.0	0.0	0.0	0.0	5,000.0
Bureau of Ocean Energy Management	52,581.6	0.0	10,430.0	38,705.8	3,445.8
Bureau of Reclamation	8,257.0	0.0	0.0	0.0	8,257.0
Bureau of Safety and Environmental Enforcement	4,125.9	0.0	0.0	160.2	3,965.8
National Park Service	4,254.4	1,321.6	95.5	306.2	2,531.1
Office of Surface Mining Reclamation and Enforcement	327.5	0.0	0.0	0.0	327.5
U.S. Geological Survey	318,094.0	0.0	22,155.4	0.0	295,938.7
Department of Transportation	30,800.5	16,427.7	0.0	0.0	14,372.8
Federal Aviation Administration	16,427.7	16,427.7	0.0	0.0	0.0
National Highway Traffic Safety Administration	14,372.8	0.0	0.0	0.0	14,372.8
Other agencies					
Agency for International Development	587.9	0.0	0.0	0.0	587.9

TABLE 46

Federal obligations for applied research in environmental sciences, by agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Atmospheric sciences	Geological sciences	Oceanography	Other environmental sciences
Consumer Product Safety Commission	817.0	0.0	0.0	0.0	817.0
Environmental Protection Agency	166,835.6	58,398.6	2,630.0	14,108.4	91,698.6
National Aeronautics and Space Administration	112,860.6	0.0	0.0	0.0	112,860.6
National Science Foundation	7,170.9	276.5	351.4	27.2	6,515.8

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 47

Federal obligations for applied research in life sciences, by agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Agricultural sciences	Biological sciences (excluding environmental biology)	Environmental biology	Medical sciences	Other life sciences
All agencies	19,423,110.3	810,912.7	9,124,634.1	433,990.3	7,385,577.2	1,667,996.0
Departments						
Department of Agriculture	1,070,191.7	633,383.3	157,544.3	267,073.8	12,002.7	187.5
Agricultural Marketing Service	3,855.3	3,855.3	0.0	0.0	0.0	0.0
Agricultural Research Service	474,921.7	368,947.0	33,084.8	64,463.6	8,426.3	0.0
Forest Service	129,330.1	12,885.5	6,190.9	110,066.2	0.0	187.5
National Institute of Food and Agriculture	459,284.7	244,895.6	118,268.7	92,544.0	3,576.5	0.0
Rural Business-Cooperative Service	2,800.0	2,800.0	0.0	0.0	0.0	0.0
Department of Commerce	69,995.9	8,153.0	31,956.0	14,061.6	4,983.0	10,842.3
National Institute of Standards and Technology	21,376.5	0.0	21,376.5	0.0	0.0	0.0
National Oceanic and Atmospheric Administration	48,619.4	8,153.0	10,579.4	14,061.6	4,983.0	10,842.3
Department of Defense	523,065.0	1,000.0	111,023.6	26,576.5	339,307.4	45,157.5
Defense Advanced Research Projects Agency	174,270.1	0.0	61,501.5	23,611.5	89,157.2	0.0
Department of the Air Force	43,599.9	0.0	4,350.9	0.0	25.1	39,224.0
Department of the Army	226,309.3	0.0	0.0	0.0	226,309.3	0.0
Department of the Navy	18,077.9	0.0	3,865.5	0.0	8,462.9	5,749.6
Other defense agencies	60,807.8	1,000.0	41,305.9	2,965.0	15,352.9	184.0
Department of Energy	17,327.4	14,400.0	2,927.3	0.0	0.0	0.0
Advanced Research Projects Agency—Energy	14,400.0	14,400.0	0.0	0.0	0.0	0.0
National Nuclear Security Administration	71.0	0.0	71.0	0.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	71.0	0.0	71.0	0.0	0.0	0.0
Office of Science	2,856.3	0.0	2,856.3	0.0	0.0	0.0
Department of Health and Human Services	15,844,561.4	0.0	8,612,916.0	0.0	5,724,942.7	1,506,702.8
Agency for Healthcare Research and Quality	172,573.6	0.0	0.0	0.0	171,307.5	1,266.1
Centers for Disease Control and Prevention	174,124.0	0.0	41,832.5	0.0	53,703.2	78,588.2
Centers for Medicare and Medicaid Services	133,488.6	0.0	0.0	0.0	133,488.6	0.0
Food and Drug Administration	493,052.5	0.0	493,052.5	0.0	0.0	0.0
Health Resources and Services Administration	16,832.6	0.0	0.0	0.0	16,832.6	0.0
National Institutes of Health	14,854,490.1	0.0	8,078,030.9	0.0	5,349,610.7	1,426,848.5
Department of Homeland Security	9,090.5	0.0	8,213.5	877.1	0.0	0.0
Science and Technology Directorate	9,090.5	0.0	8,213.5	877.1	0.0	0.0
Department of the Interior	190,899.2	32,650.0	77,860.0	80,389.2	0.0	0.0

TABLE 47

Federal obligations for applied research in life sciences, by agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Agricultural sciences	Biological sciences (excluding environmental biology)	Environmental biology	Medical sciences	Other life sciences
Bureau of Land Management	12,857.0	0.0	0.0	12,857.0	0.0	0.0
National Park Service	4,249.2	0.0	3,054.2	1,195.0	0.0	0.0
U.S. Fish and Wildlife Service	32,650.0	32,650.0	0.0	0.0	0.0	0.0
U.S. Geological Survey	141,143.0	0.0	74,805.8	66,337.2	0.0	0.0
Department of Justice	7,486.6	0.0	6,066.5	0.0	0.0	1,420.1
Office of Justice Programs	7,486.6	0.0	6,066.5	0.0	0.0	1,420.1
Department of State	60,000.0	0.0	0.0	0.0	60,000.0	0.0
Department of Transportation	9,390.3	0.0	0.0	0.0	9,390.3	0.0
Federal Aviation Administration	9,390.3	0.0	0.0	0.0	9,390.3	0.0
Department of Veterans Affairs	618,811.2	0.0	0.0	0.0	618,811.2	0.0
Other agencies						
Agency for International Development	158,222.0	120,750.2	0.0	0.0	37,471.8	0.0
Environmental Protection Agency	159,914.7	576.2	110,535.8	44,964.7	237.6	3,600.4
National Aeronautics and Space Administration	100,085.4	0.0	0.0	0.0	0.0	100,085.4
National Science Foundation	5,638.5	0.0	5,591.0	47.4	0.0	0.0
Patient-Centered Outcomes Research Trust Fund	578,430.5	0.0	0.0	0.0	578,430.5	0.0

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 48

Federal obligations for applied research in physical sciences, by agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Astronomy	Chemistry	Physics	Other physical sciences
All agencies	1,909,174.4	6,220.8	434,164.6	875,339.8	593,449.1
Departments					
Department of Agriculture	44,573.4	0.0	43,332.7	1,240.7	0.0
Agricultural Research Service	33,188.2	0.0	31,947.5	1,240.7	0.0
Forest Service	2,434.2	0.0	2,434.2	0.0	0.0
National Institute of Food and Agriculture	8,950.9	0.0	8,950.9	0.0	0.0
Department of Commerce	71,396.0	0.0	25,224.1	43,794.4	2,377.6
National Institute of Standards and Technology	51,130.0	0.0	23,665.1	25,087.4	2,377.6
National Oceanic and Atmospheric Administration	20,266.0	0.0	1,559.0	18,707.0	0.0
Department of Defense	429,632.0	5,736.8	152,521.6	161,091.6	110,281.9
Defense Advanced Research Projects Agency	65,106.1	0.0	28,808.2	35,869.5	428.4
Department of the Air Force	137,723.3	171.4	5,265.9	86,277.3	46,008.6
Department of the Army	4,885.9	0.0	0.0	4,885.9	0.0
Department of the Navy	33,952.3	5,565.4	4,200.1	5,111.0	19,075.8
Other defense agencies	187,964.4	0.0	114,247.4	28,947.9	44,769.1
Department of Energy	993,707.3	0.0	143,769.7	652,833.0	197,104.6
Advanced Research Projects Agency—Energy	42,117.1	0.0	19,871.3	22,245.8	0.0
Fossil Energy	100,000.0	0.0	100,000.0	0.0	0.0
National Nuclear Security Administration	825,743.7	0.0	8,658.7	619,980.5	197,104.6
Defense Programs	712,545.9	0.0	0.0	582,206.5	130,339.4
Office of Defense Nuclear Nonproliferation	113,197.8	0.0	8,658.7	37,774.0	66,765.2
Office of Science	25,846.4	0.0	15,239.8	10,606.7	0.0
Department of Health and Human Services	42,936.7	0.0	42,400.9	0.0	535.9
National Institutes of Health	42,936.7	0.0	42,400.9	0.0	535.9
Department of Homeland Security	34,826.4	0.0	7,461.9	3,619.5	23,745.0
Cybersecurity and Infrastructure Security Agency	798.0	0.0	798.0	0.0	0.0
Science and Technology Directorate	34,028.4	0.0	6,663.9	3,619.5	23,745.0
Department of the Interior	241.7	0.0	0.0	0.0	241.7
National Park Service	241.7	0.0	0.0	0.0	241.7
Department of Justice	9,974.2	0.0	5,176.7	0.0	4,797.6
Office of Justice Programs	9,974.2	0.0	5,176.7	0.0	4,797.6
Department of Transportation	4,440.1	0.0	3,440.1	0.0	1,000.0
Pipeline and Hazardous Materials Safety Administration	4,440.1	0.0	3,440.1	0.0	1,000.0
Department of the Treasury	35,715.0	0.0	0.0	0.0	35,715.0
Bureau of Engraving and Printing	35,715.0	0.0	0.0	0.0	35,715.0
Other agencies					
Consumer Product Safety Commission	39.3	0.0	0.0	0.0	39.3
Environmental Protection Agency	9,665.5	0.0	8,523.1	0.0	1,142.4
Federal Communications Commission	300.0	0.0	0.0	300.0	0.0
Library of Congress	867.6	0.0	867.6	0.0	0.0
National Aeronautics and Space Administration	219,324.5	0.0	0.0	7,022.0	212,302.5
National Science Foundation	11,534.8	484.0	1,446.4	5,438.7	4,165.7

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 49

Federal obligations for applied research in psychology, by agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Biological aspects	Social aspects	Other psychological sciences
All agencies	1,387,487.3	1,445.9	42,140.4	1,343,901.0
Departments				
Department of Commerce	86.6	86.6	0.0	0.0
National Institute of Standards and Technology	86.6	86.6	0.0	0.0
Department of Defense	66,763.4	0.0	11,230.3	55,533.1
Department of the Air Force	348.3	0.0	0.0	348.3
Department of the Army	55,132.8	0.0	0.0	55,132.8
Department of the Navy	11,271.3	0.0	11,230.3	40.9
Other defense agencies	11.0	0.0	0.0	11.0
Department of Health and Human Services	1,182,523.1	417.0	7,382.5	1,174,723.6
Agency for Healthcare Research and Quality	7,799.5	417.0	7,382.5	0.0
National Institutes of Health	1,174,723.6	0.0	0.0	1,174,723.6
Department of Homeland Security	57.2	0.0	0.0	57.2
U.S. Coast Guard	57.2	0.0	0.0	57.2
Department of Justice	2,724.1	942.3	1,781.8	0.0
Office of Justice Programs	2,724.1	942.3	1,781.8	0.0
Department of Transportation	21,745.8	0.0	21,745.8	0.0
Federal Aviation Administration	21,745.8	0.0	21,745.8	0.0
Department of Veterans Affairs	113,587.2	0.0	0.0	113,587.2

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 50

Federal obligations for applied research in social sciences, by agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Anthropology	Economics	Political science	Sociology	Other social sciences
All agencies	704,456.9	2,290.1	209,229.3	3,905.3	187,366.3	301,665.9
Departments						
Department of Agriculture	172,806.6	0.0	149,426.3	0.0	22,351.8	1,028.5
Agricultural Research Service	1,240.7	0.0	1,240.7	0.0	0.0	0.0
Economic Research Service	85,626.4	0.0	85,626.4	0.0	0.0	0.0
Forest Service	26,865.9	0.0	19,850.9	0.0	5,986.5	1,028.5
National Institute of Food and Agriculture	57,961.3	0.0	41,596.0	0.0	16,365.3	0.0
Rural Business-Cooperative Service	1,112.5	0.0	1,112.5	0.0	0.0	0.0
Department of Commerce	28,592.2	0.0	14,578.1	1,812.0	2,726.8	9,475.3
National Institute of Standards and Technology	583.2	0.0	583.2	0.0	0.0	0.0
National Oceanic and Atmospheric Administration	4,610.5	0.0	906.0	1,812.0	906.0	986.5
U.S. Census Bureau	23,398.5	0.0	13,088.9	0.0	1,820.8	8,488.8
Department of Defense	5,673.2	0.0	1,100.0	0.0	0.0	4,573.2
Department of the Navy	3,090.2	0.0	0.0	0.0	0.0	3,090.2
Other defense agencies	2,583.0	0.0	1,100.0	0.0	0.0	1,483.0
Department of Education	131,380.1	0.0	0.0	0.0	0.0	131,380.1
Department of Health and Human Services	98,167.1	36.1	9,956.5	0.0	0.0	88,174.5
Administration for Children and Families	2,254.8	0.0	0.0	0.0	0.0	2,254.8
Agency for Healthcare Research and Quality	20,813.1	36.1	9,956.5	0.0	0.0	10,820.5
Centers for Disease Control and Prevention	1,011.1	0.0	0.0	0.0	0.0	1,011.1
Health Resources and Services Administration	2,265.5	0.0	0.0	0.0	0.0	2,265.5
National Institutes of Health	54,777.1	0.0	0.0	0.0	0.0	54,777.1
Office of the Secretary of Health and Human Services	17,045.5	0.0	0.0	0.0	0.0	17,045.5
Office of the Assistant Secretary for Planning and Evaluation	17,045.5	0.0	0.0	0.0	0.0	17,045.5
Department of Homeland Security	6,351.0	0.0	3,756.3	2,093.3	501.3	0.0
Cybersecurity and Infrastructure Security Agency	5,849.7	0.0	3,756.3	2,093.3	0.0	0.0
Science and Technology Directorate	501.3	0.0	0.0	0.0	501.3	0.0
Department of Housing and Urban Development	14,833.6	0.0	12,620.3	0.0	663.6	1,549.7
Department of the Interior	8,762.1	189.0	5,778.8	0.0	2,267.3	527.1
Bureau of Ocean Energy Management	8,235.0	189.0	5,778.8	0.0	2,267.3	0.0
National Park Service	527.1	0.0	0.0	0.0	0.0	527.1
Department of Justice	52,550.6	2,065.0	0.0	0.0	5,821.6	44,664.1
Bureau of Prisons	1,249.0	0.0	0.0	0.0	1,249.0	0.0
Office of Justice Programs	51,301.6	2,065.0	0.0	0.0	4,572.6	44,664.1
Department of Labor	4,366.1	0.0	2,642.1	0.0	0.0	1,724.0
Employee Benefits Security Administration	2,642.1	0.0	2,642.1	0.0	0.0	0.0
Occupational Safety and Health Administration	1,724.0	0.0	0.0	0.0	0.0	1,724.0
Department of State	2,200.0	0.0	0.0	0.0	2,200.0	0.0
Department of Transportation	1,596.8	0.0	0.0	0.0	0.0	1,596.8
Federal Railroad Administration	1,596.8	0.0	0.0	0.0	0.0	1,596.8
Other agencies						
Agency for International Development	12,904.0	0.0	0.0	0.0	4,590.0	8,314.0
Appalachian Regional Commission	898.9	0.0	898.9	0.0	0.0	0.0
Environmental Protection Agency	2,338.3	0.0	2,338.3	0.0	0.0	0.0
Federal Communications Commission	130.3	0.0	130.3	0.0	0.0	0.0
Federal Trade Commission	6,003.2	0.0	6,003.2	0.0	0.0	0.0
National Science Foundation	2,554.8	0.0	0.0	0.0	3.0	2,551.8

TABLE 50
Federal obligations for applied research in social sciences, by agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Anthropology	Economics	Political science	Sociology	Other social sciences
Social Security Administration	146,241.0	0.0	0.0	0.0	146,241.0	0.0
U.S. Agency for Global Media	6,107.0	0.0	0.0	0.0	0.0	6,107.0

Note(s):
Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):
National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 51

Federal obligations for experimental development, by agency and performer: FY 2019

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
All agencies	61,306,422.5	21,014,509.4	33,707,091.8	2,410,913.0	1,619,492.9	469,483.2	558,717.5	990,620.2	86,075.9	449,518.7
Departments										
Department of Agriculture	230,147.0	209,664.6	0.0	0.0	18,562.6	0.0	1,586.5	0.0	34.8	298.3
Agricultural Marketing Service	3,855.3	3,855.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agricultural Research Service	129,237.4	114,741.8	0.0	0.0	12,731.8	0.0	1,430.6	0.0	34.8	298.3
Animal and Plant Health Inspection Service	20,663.8	15,002.0	0.0	0.0	5,661.8	0.0	0.0	0.0	0.0	0.0
Forest Service	72,184.4	72,184.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Agricultural Statistics Service	4,206.1	3,881.2	0.0	0.0	169.0	0.0	156.0	0.0	0.0	0.0
Department of Commerce	252,776.5	162,867.5	152.5	0.0	80,539.9	7,433.3	687.1	296.8	797.3	2.0
National Institute of Standards and Technology	9,383.1	4,108.1	0.0	0.0	5,275.0	0.0	0.0	0.0	0.0	0.0
National Oceanic and Atmospheric Administration	177,036.0	92,402.0	152.5	0.0	75,264.9	7,433.3	687.1	296.8	797.3	2.0
U.S. Census Bureau	66,357.3	66,357.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Defense, total experimental development	50,511,101.4	17,710,018.3	29,428,324.2	318,416.3	1,124,355.7	361,613.0	462,249.1	648,920.0	27,929.5	429,275.3
Defense Advanced Research Projects Agency	1,577,650.0	262,855.1	1,195,320.7	12,892.5	42,686.0	29,053.9	15,399.7	7,492.3	0.0	11,949.7
Department of the Air Force	12,969,873.5	3,410,088.7	8,910,422.9	101,426.0	79,720.5	80,171.9	11,800.2	272,989.6	8,227.5	95,026.3
Department of the Army	8,318,600.8	3,126,641.2	4,739,723.0	7,079.0	144,986.8	24,922.6	176,763.1	49,794.9	4.8	48,685.4
Department of the Navy	13,750,549.8	5,528,986.6	7,558,796.2	28,169.4	347,600.3	41,530.1	128,494.3	92,954.1	445.4	23,573.4
Other defense agencies	13,894,427.3	5,381,446.7	7,024,061.5	168,849.4	509,362.2	185,934.4	129,791.8	225,689.1	19,251.7	250,040.5
Department of Defense, advanced technology	6,923,229.2	2,636,363.0	3,433,933.5	63,414.6	327,226.7	82,501.2	248,371.9	56,778.0	2,243.6	72,396.6
Defense Advanced Research Projects Agency	1,411,522.0	201,943.3	1,090,104.5	12,892.5	42,686.0	29,053.9	15,399.7	7,492.3	0.0	11,949.7
Department of the Air Force	836,861.0	364,268.4	442,719.3	664.8	15,151.8	190.7	6,173.0	7,595.8	97.2	0.0

TABLE 51

Federal obligations for experimental development, by agency and performer: FY 2019

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Department of the Army	1,636,954.0	687,350.9	811,010.8	22.8	69,053.2	4,404.0	56,090.5	2,380.4	0.0	6,641.2
Department of the Navy	1,008,189.3	415,539.7	417,767.5	851.4	68,780.0	200.0	97,322.5	6,549.6	329.4	849.2
Other defense agencies	2,029,702.9	967,260.7	672,331.3	48,983.1	131,555.8	48,652.6	73,386.2	32,759.8	1,817.0	52,956.4
Department of Defense, major systems	43,587,872.3	15,073,655.3	25,994,390.7	255,001.7	797,129.0	279,111.8	213,877.1	592,141.9	25,685.9	356,878.8
Defense Advanced Research Projects Agency	166,128.0	60,911.8	105,216.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Air Force	12,133,012.6	3,045,820.3	8,467,703.5	100,761.2	64,568.7	79,981.2	5,627.2	265,393.7	8,130.3	95,026.3
Department of the Army	6,681,646.8	2,439,290.2	3,928,712.2	7,056.2	75,933.6	20,518.6	120,672.6	47,414.5	4.8	42,044.1
Department of the Navy	12,742,360.5	5,113,446.9	7,141,028.7	27,318.0	278,820.4	41,330.1	31,171.8	86,404.4	116.0	22,724.2
Other defense agencies	11,864,724.4	4,414,186.0	6,351,730.1	119,866.3	377,806.4	137,281.9	56,405.6	192,929.3	17,434.7	197,084.2
Department of Education	47,187.0	1,911.5	10,512.3	0.0	30,477.4	0.0	4,140.4	0.0	145.4	0.0
Department of Energy	3,006,678.3	77,211.9	332,996.9	2,084,480.3	210,101.3	67,495.6	10,533.8	219,920.8	3,711.3	226.5
Advanced Research Projects Agency—Energy	202,477.3	0.0	85,594.9	10,582.8	81,578.5	5,374.4	6,974.3	12,372.3	0.0	0.0
Electricity Delivery and Energy Reliability	50,750.0	1,160.2	3,344.4	11,834.1	6,019.0	5,083.1	3,547.4	19,605.1	156.7	0.0
Energy Efficiency and Renewable Energy	425,497.0	0.0	99,232.7	32,013.4	103,084.2	45,096.3	0.0	142,515.7	3,554.6	0.0
Environmental Management	17,507.0	0.0	4,422.5	3,504.1	9,429.7	150.7	0.0	0.0	0.0	0.0
National Nuclear Security Administration	2,070,467.7	74,587.1	74,491.1	1,906,625.5	0.0	2,180.0	12.0	12,572.0	0.0	0.0
Defense Programs	226,340.2	74,587.1	61,331.2	88,400.0	0.0	0.0	12.0	2,010.0	0.0	0.0
Naval Nuclear Propulsion Program	1,788,618.0	0.0	0.0	1,788,618.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	55,509.5	0.0	13,160.0	29,607.5	0.0	2,180.0	0.0	10,562.0	0.0	0.0
Nuclear Energy	228,120.4	1,464.6	54,052.3	119,920.4	9,989.9	9,611.0	0.0	32,855.7	0.0	226.5
Office of Cybersecurity, Energy Security, and Emergency Response	11,859.0	0.0	11,859.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 51

Federal obligations for experimental development, by agency and performer: FY 2019

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Department of Health and Human Services	836,787.6	34,739.2	658,314.3	0.0	105,343.7	0.0	35,290.1	0.0	3,100.2	0.0
Administration for Community Living	17,195.1	0.0	3,129.5	0.0	11,066.0	0.0	2,897.0	0.0	102.7	0.0
Agency for Healthcare Research and Quality	29,855.0	29,855.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biomedical Advanced Research and Development Authority	736,178.0	0.0	655,184.9	0.0	58,115.6	0.0	22,877.5	0.0	0.0	0.0
Centers for Disease Control and Prevention	53,559.4	4,884.2	0.0	0.0	36,162.2	0.0	9,515.6	0.0	2,997.5	0.0
Department of Homeland Security	367,626.4	95,532.3	219,564.2	7,373.9	1,113.2	1,939.7	1,423.8	33,031.1	217.9	7,430.3
Countering Weapons of Mass Destruction Office	50,227.4	1,479.3	29,591.3	7,373.9	1,113.2	775.0	300.0	3,633.9	0.0	5,960.9
Science and Technology Directorate	281,198.3	85,035.0	163,040.2	0.0	0.0	914.7	1,123.8	29,397.2	217.9	1,469.4
Transportation Security Administration	20,600.0	0.0	20,600.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Coast Guard	13,661.0	9,018.0	4,643.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Secret Service	1,939.7	0.0	1,689.7	0.0	0.0	250.0	0.0	0.0	0.0	0.0
Department of the Interior	137,069.2	111,050.0	2,678.8	0.0	11,842.7	0.0	1,226.8	99.0	10,171.8	0.0
Bureau of Land Management	7,033.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7,033.0	0.0
Bureau of Ocean Energy Management	20,426.0	18,650.2	1,694.3	0.0	0.0	0.0	0.0	0.0	81.5	0.0
Bureau of Reclamation	6,653.0	1,174.0	425.0	0.0	4,318.0	0.0	349.0	99.0	288.0	0.0
Bureau of Safety and Environmental Enforcement	1,539.2	481.4	469.2	0.0	0.0	0.0	588.6	0.0	0.0	0.0
U.S. Geological Survey	101,418.0	90,744.4	90.4	0.0	7,524.7	0.0	289.2	0.0	2,769.3	0.0
Department of Justice	15,825.5	1,852.7	194.5	0.0	6,507.3	0.0	2,297.9	0.0	4,973.1	0.0
Bureau of Prisons	5,347.0	1,247.0	0.0	0.0	0.0	0.0	0.0	0.0	4,100.0	0.0
Office of Justice Programs	10,478.5	605.7	194.5	0.0	6,507.3	0.0	2,297.9	0.0	873.1	0.0

TABLE 51

Federal obligations for experimental development, by agency and performer: FY 2019

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Department of Transportation	266,881.6	43,368.7	92,206.6	0.0	11,866.5	0.0	9,273.4	77,424.8	32,639.5	102.0
Federal Aviation Administration	193,906.5	22,206.5	85,239.4	0.0	8,551.0	0.0	484.7	77,424.8	0.0	0.0
Federal Highway Administration	36,745.3	4,105.8	0.0	0.0	0.0	0.0	0.0	0.0	32,639.5	0.0
Federal Railroad Administration	7,491.2	960.4	4,822.0	0.0	1,048.6	0.0	558.2	0.0	0.0	102.0
Office of the Secretary of Transportation	11,565.1	10,475.1	1,090.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pipeline and Hazardous Materials Safety Administration	17,173.4	5,620.9	1,055.2	0.0	2,266.8	0.0	8,230.5	0.0	0.0	0.0
Department of the Treasury	10,966.1	0.0	10,966.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bureau of Engraving and Printing	10,966.1	0.0	10,966.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Veterans Affairs	30,264.4	30,264.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other agencies										
Agency for International Development	48,874.4	4,887.4	9,427.7	0.0	6,157.4	0.0	27,926.9	0.0	0.0	475.0
Environmental Protection Agency	80,521.0	41,376.2	39,144.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Library of Congress	1,024.9	1,024.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	5,458,639.2	2,488,739.8	2,898,557.0	642.5	12,625.2	31,001.5	2,081.5	10,927.7	2,355.0	11,709.2
Tennessee Valley Authority	4,052.0	0.0	4,052.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.**Note(s):**Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 52

Preliminary federal obligations for experimental development, by agency and performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
All agencies	65,622,247.5	22,939,632.3	35,665,096.1	2,269,262.4	1,702,353.5	510,721.2	773,541.5	1,193,492.5	60,503.0	507,645.0
Departments										
Department of Agriculture	214,927.7	198,038.8	0.0	0.0	15,313.2	0.0	1,325.7	0.0	26.1	223.8
Agricultural Marketing Service	3,476.3	3,476.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agricultural Research Service	141,400.0	130,528.3	0.0	0.0	9,548.9	0.0	1,072.9	0.0	26.1	223.8
Animal and Plant Health Inspection Service	20,686.0	15,087.9	0.0	0.0	5,598.1	0.0	0.0	0.0	0.0	0.0
Forest Service	45,760.1	45,760.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Agricultural Statistics Service	3,605.3	3,186.3	0.0	0.0	166.2	0.0	252.8	0.0	0.0	0.0
Department of Commerce	251,387.5	176,975.3	390.3	293.1	67,662.9	2,688.8	2,101.8	0.0	1,270.0	5.2
National Institute of Standards and Technology	20,457.4	12,752.2	0.0	0.0	6,705.2	0.0	1,000.0	0.0	0.0	0.0
National Oceanic and Atmospheric Administration	149,583.0	82,876.0	390.3	293.1	60,957.7	2,688.8	1,101.8	0.0	1,270.0	5.2
U.S. Census Bureau	81,347.1	81,347.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Defense, total experimental development	53,996,391.4	19,241,497.3	31,235,699.9	336,514.4	1,106,369.7	352,715.7	657,070.9	613,014.2	7,993.0	445,516.3
Defense Advanced Research Projects Agency	1,672,408.0	301,188.8	1,241,133.3	14,037.6	46,477.3	31,634.5	16,767.5	8,157.8	0.0	13,011.1
Department of the Air Force	13,456,974.9	3,632,948.1	9,202,007.6	122,672.4	77,379.9	48,282.7	15,502.1	231,974.4	6,207.6	120,000.0
Department of the Army	8,941,947.8	3,409,819.4	5,067,167.5	9,280.6	147,869.2	25,079.1	182,704.0	53,126.6	5.2	46,896.2
Department of the Navy	15,240,235.0	6,189,612.8	8,303,021.5	83,439.0	389,344.4	43,441.2	133,545.8	75,736.3	432.8	21,661.3
Other defense agencies	14,684,825.6	5,707,928.1	7,422,370.0	107,084.7	445,298.9	204,278.1	308,551.4	244,019.2	1,347.4	243,947.8
Department of Defense, advanced technology	7,301,773.5	2,746,666.0	3,543,497.0	71,409.2	314,671.6	78,958.7	445,970.2	50,122.5	961.6	49,516.7
Defense Advanced Research Projects Agency	1,536,893.0	219,879.8	1,186,927.3	14,037.6	46,477.3	31,634.5	16,767.5	8,157.8	0.0	13,011.1
Department of the Air Force	942,258.3	410,145.7	498,477.0	748.5	17,060.0	214.7	6,950.4	8,552.5	109.4	0.0

TABLE 52

Preliminary federal obligations for experimental development, by agency and performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Department of the Army	1,498,111.8	629,051.6	742,223.0	20.9	63,196.3	4,030.5	51,333.0	2,178.5	0.0	6,078.0
Department of the Navy	981,995.9	404,313.7	407,736.8	1,070.2	66,831.8	211.2	94,565.9	6,121.2	320.1	825.2
Other defense agencies	2,342,514.4	1,083,275.2	708,132.8	55,532.0	121,106.1	42,867.9	276,353.3	25,112.5	532.0	29,602.5
Department of Defense, major systems	46,694,617.9	16,494,831.2	27,692,203.0	265,105.2	791,698.2	273,756.9	211,100.7	562,891.7	7,031.5	395,999.6
Defense Advanced Research Projects Agency	135,515.0	81,309.0	54,206.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Air Force	12,514,716.6	3,222,802.4	8,703,530.6	121,923.9	60,319.9	48,068.0	8,551.7	223,421.9	6,098.2	120,000.0
Department of the Army	7,443,836.0	2,780,767.8	4,324,944.5	9,259.7	84,672.9	21,048.6	131,370.9	50,948.1	5.2	40,818.2
Department of the Navy	14,258,239.1	5,785,299.1	7,895,284.7	82,368.9	322,512.6	43,230.0	38,979.9	69,615.0	112.7	20,836.1
Other defense agencies	12,342,311.1	4,624,652.9	6,714,237.1	51,552.7	324,192.7	161,410.3	32,198.1	218,906.6	815.4	214,345.3
Department of Education	50,896.5	1,984.8	640.1	0.0	38,167.6	0.0	9,328.0	250.0	525.9	0.0
Department of Energy	3,454,313.1	79,675.3	521,663.9	1,927,963.4	361,133.9	130,305.9	12,265.4	412,564.1	8,741.2	0.0
Advanced Research Projects Agency—Energy	212,500.0	0.0	89,831.9	11,106.7	85,616.7	5,640.5	7,319.6	12,984.8	0.0	0.0
Electricity Delivery and Energy Reliability	70,584.0	1,613.6	4,651.5	16,459.1	8,371.3	7,069.7	4,933.8	27,267.1	217.9	0.0
Energy Efficiency and Renewable Energy	1,020,253.0	0.0	237,939.3	76,761.5	247,174.5	108,131.6	0.0	341,722.8	8,523.2	0.0
Environmental Management	7,751.8	0.0	2,140.7	1,641.4	3,216.0	402.0	0.0	351.8	0.0	0.0
National Nuclear Security Administration	1,948,845.3	77,587.1	81,764.7	1,771,181.0	0.0	1,956.0	12.0	16,344.5	0.0	0.0
Defense Programs	236,749.0	77,587.1	64,331.2	91,400.0	0.0	0.0	12.0	3,418.8	0.0	0.0
Naval Nuclear Propulsion Program	1,648,396.0	0.0	0.0	1,648,396.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	63,700.3	0.0	17,433.5	31,385.0	0.0	1,956.0	0.0	12,925.8	0.0	0.0
Nuclear Energy	175,124.9	474.6	86,081.9	50,813.6	16,755.5	7,106.2	0.0	13,893.2	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	19,254.0	0.0	19,254.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 52

Preliminary federal obligations for experimental development, by agency and performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Department of Health and Human Services	818,725.8	1,971.2	721,980.6	0.0	55,984.1	0.0	36,230.8	0.0	2,559.2	0.0
Administration for Community Living	18,395.6	0.0	3,532.3	0.0	10,191.7	0.0	4,547.4	0.0	124.2	0.0
Biomedical Advanced Research and Development Authority	747,036.5	0.0	718,448.3	0.0	7,321.2	0.0	21,267.1	0.0	0.0	0.0
Centers for Disease Control and Prevention	53,293.7	1,971.2	0.0	0.0	38,471.2	0.0	10,416.3	0.0	2,435.0	0.0
Department of Homeland Security	274,785.8	73,878.8	165,391.1	4,312.0	0.0	1,250.0	10,200.0	16,979.9	0.0	2,774.0
Countering Weapons of Mass Destruction Office	17,342.4	1,454.0	7,622.5	4,312.0	0.0	0.0	200.0	979.9	0.0	2,774.0
Science and Technology Directorate	229,000.0	70,000.0	132,000.0	0.0	0.0	1,000.0	10,000.0	16,000.0	0.0	0.0
Transportation Security Administration	22,900.0	0.0	22,900.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Coast Guard	3,464.0	2,424.8	1,039.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Secret Service	2,079.4	0.0	1,829.4	0.0	0.0	250.0	0.0	0.0	0.0	0.0
Department of the Interior	164,756.8	137,227.3	2,903.6	0.0	12,366.1	300.0	1,337.2	300.0	10,322.5	0.0
Bureau of Land Management	7,032.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7,032.0	0.0
Bureau of Ocean Energy Management	29,663.0	27,497.0	2,074.7	0.0	0.0	0.0	0.0	0.0	91.3	0.0
Bureau of Reclamation	18,850.0	13,000.0	150.0	0.0	4,500.0	300.0	300.0	300.0	300.0	0.0
Bureau of Safety and Environmental Enforcement	1,922.3	601.2	585.9	0.0	0.0	0.0	735.1	0.0	0.0	0.0
U.S. Geological Survey	107,289.5	96,129.1	93.0	0.0	7,866.1	0.0	302.1	0.0	2,899.2	0.0
Department of Justice	16,460.1	1,889.8	198.4	0.0	6,637.4	0.0	2,343.9	0.0	5,390.5	0.0
Bureau of Prisons	5,772.0	1,272.0	0.0	0.0	0.0	0.0	0.0	0.0	4,500.0	0.0
Office of Justice Programs	10,688.1	617.8	198.4	0.0	6,637.4	0.0	2,343.9	0.0	890.5	0.0
Department of Transportation	421,947.3	50,823.3	173,839.5	0.0	22,371.7	0.0	11,901.4	140,770.7	21,740.8	500.0

TABLE 52

Preliminary federal obligations for experimental development, by agency and performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Federal Aviation Administration	343,923.4	31,745.5	154,978.8	0.0	15,547.1	0.0	881.3	140,770.7	0.0	0.0
Federal Highway Administration	25,846.6	4,105.8	0.0	0.0	0.0	0.0	0.0	0.0	21,740.8	0.0
Federal Railroad Administration	6,020.7	1,264.3	3,251.2	0.0	1,324.6	0.0	180.6	0.0	0.0	0.0
Office of the Secretary of Transportation	11,844.7	11,844.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pipeline and Hazardous Materials Safety Administration	34,312.0	1,863.0	15,609.5	0.0	5,500.0	0.0	10,839.5	0.0	0.0	500.0
Department of the Treasury	10,966.1	0.0	10,966.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bureau of Engraving and Printing	10,966.1	0.0	10,966.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Veterans Affairs	32,176.3	32,176.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other agencies										
Agency for International Development	48,874.4	4,887.4	9,427.7	0.0	6,157.4	0.0	27,926.9	0.0	0.0	475.0
Environmental Protection Agency	76,594.6	54,086.3	22,508.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Library of Congress	1,616.9	1,616.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	5,785,116.6	2,882,903.6	2,797,175.6	179.6	10,189.3	23,460.7	1,509.5	9,613.6	1,933.8	58,150.8
Tennessee Valley Authority	2,311.0	0.0	2,311.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.**Note(s):**

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 53

Federal obligations and outlays for R&D plant, by agency: FYs 2019–20

(Dollars in thousands)

Agency	Obligations		Outlays	
	2019	2020 (preliminary)	2019	2020 (preliminary)
All agencies	4,376,447.8	4,759,030.8	5,015,850.8	5,713,634.2
Departments				
Department of Agriculture	28,992.4	430,008.0	48,947.5	109,008.0
Agricultural Research Service	19,356.8	428,000.0	39,311.9	107,000.0
Forest Service	9,635.6	2,008.0	9,635.6	2,008.0
Department of Commerce	464,332.3	618,526.0	385,714.6	343,220.0
National Institute of Standards and Technology	118,969.3	371,979.0	132,714.6	151,220.0
National Oceanic and Atmospheric Administration	345,363.0	246,547.0	253,000.0	192,000.0
Department of Defense	609,655.9	305,580.7	353,254.8	331,247.0
Department of the Air Force	192,630.2	160,405.1	205,069.9	202,958.5
Department of the Navy	143,167.7	134,322.2	126,334.7	117,241.2
Other defense agencies	273,858.0	10,853.4	21,850.2	11,047.3
Department of Energy	2,245,499.5	2,403,147.0	3,236,625.9	3,849,515.5
Energy Efficiency and Renewable Energy	305,460.0	418,575.0	1,738,392.0	1,953,409.0
Fossil Energy	23,000.0	29,000.0	23,000.0	29,000.0
National Nuclear Security Administration	337,342.0	292,492.0	275,351.0	281,509.5
Defense Programs	337,342.0	281,492.0	275,351.0	272,509.5
Office of Defense Nuclear Nonproliferation	0.0	11,000.0	0.0	9,000.0
Nuclear Energy	0.0	65,000.0	0.0	26,000.0
Office of Science	1,579,697.5	1,598,080.0	1,199,882.9	1,559,597.0
Department of Health and Human Services	243,000.0	265,000.0	156,000.0	223,000.0
Centers for Medicare and Medicaid Services	0.0	0.0	*	0.0
Food and Drug Administration	26,000.0	35,000.0	26,000.0	35,000.0
National Institutes of Health	217,000.0	230,000.0	130,000.0	188,000.0
Department of Homeland Security	1,306.0	0.0	206,306.0	170,000.0
Science and Technology Directorate	0.0	0.0	205,000.0	170,000.0
U.S. Coast Guard	1,306.0	0.0	1,306.0	0.0
Department of the Interior	4,646.5	8,397.9	3,706.3	6,349.5
Bureau of Reclamation	1,150.0	1,150.0	1,150.0	1,150.0
Bureau of Safety and Environmental Enforcement	3,496.5	7,247.9	2,556.3	5,199.5
Department of Transportation	39,261.0	49,418.8	37,688.8	36,762.0
Federal Aviation Administration	37,269.8	47,682.8	36,000.0	35,000.0
Federal Railroad Administration	1,991.2	1,736.0	1,688.8	1,762.0
Department of the Treasury	4,133.8	1,266.4	4,133.8	1,266.4
Bureau of Engraving and Printing	1,860.0	1,000.0	1,860.0	1,000.0
U.S. Mint	2,273.8	266.4	2,273.8	266.4
Other agencies				
Environmental Protection Agency	4,695.0	4,499.0	4,695.0	4,499.0
National Aeronautics and Space Administration	46,225.4	86,347.0	78,218.3	76,206.8
National Science Foundation	652,140.0	554,280.0	468,000.0	530,000.0
Smithsonian Institution	32,560.0	32,560.0	32,560.0	32,560.0

* = amount greater than \$0 but less than \$50.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations or outlays in variables represented by this table appear in the table. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 54

Federal obligations for R&D plant, by agency and R&D performer: FY 2019

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
U.S. Coast Guard	1,306.0	1,306.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	4,646.5	1,366.0	3,280.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bureau of Reclamation	1,150.0	1,150.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bureau of Safety and Environmental Enforcement	3,496.5	216.0	3,280.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Transportation	39,261.0	1,744.4	37,470.6	0.0	0.0	0.0	46.0	0.0	0.0	0.0
Federal Aviation Administration	37,269.8	1,670.6	35,553.3	0.0	0.0	0.0	46.0	0.0	0.0	0.0
Federal Railroad Administration	1,991.2	73.8	1,917.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Treasury	4,133.8	2,273.8	1,860.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bureau of Engraving and Printing	1,860.0	0.0	1,860.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Mint	2,273.8	2,273.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other agencies										
Environmental Protection Agency	4,695.0	0.0	4,695.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	46,225.4	0.0	26,225.4	0.0	0.0	9,700.0	0.0	0.0	0.0	10,300.0
National Science Foundation	652,140.0	11,531.6	104,047.2	0.0	365,607.2	0.0	169,778.3	0.0	1,175.7	0.0
Smithsonian Institution	32,560.0	32,560.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.**Note(s):**

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 55

Preliminary federal obligations for R&D plant, by agency and R&D performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
All agencies	4,759,030.8	1,652,027.0	207,549.2	350,325.0	427,055.1	799,308.1	241,908.0	1,076,333.0	999.2	3,526.1
Departments										
Department of Agriculture	430,008.0	430,008.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agricultural Research Service	428,000.0	428,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Forest Service	2,008.0	2,008.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Commerce	618,526.0	618,526.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Institute of Standards and Technology	371,979.0	371,979.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Oceanic and Atmospheric Administration	246,547.0	246,547.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Defense	305,580.7	276,884.0	22,202.4	3,833.0	1,686.3	775.0	0.0	200.0	0.0	0.0
Department of the Air Force	160,405.1	146,945.5	13,459.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Navy	134,322.2	120,611.1	7,216.8	3,833.0	1,686.3	775.0	0.0	200.0	0.0	0.0
Other defense agencies	10,853.4	9,327.3	1,526.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Energy	2,403,147.0	34,000.0	11,000.0	346,492.0	41,000.0	796,972.0	97,550.0	1,076,133.0	0.0	0.0
Energy Efficiency and Renewable Energy	418,575.0	0.0	0.0	0.0	0.0	0.0	0.0	418,575.0	0.0	0.0
Fossil Energy	29,000.0	29,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Nuclear Security Administration	292,492.0	0.0	11,000.0	281,492.0	0.0	0.0	0.0	0.0	0.0	0.0
Defense Programs	281,492.0	0.0	0.0	281,492.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	11,000.0	0.0	11,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nuclear Energy	65,000.0	0.0	0.0	65,000.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Science	1,598,080.0	5,000.0	0.0	0.0	41,000.0	796,972.0	97,550.0	657,558.0	0.0	0.0
Department of Health and Human Services	265,000.0	191,370.7	0.0	0.0	73,629.3	0.0	0.0	0.0	0.0	0.0
Food and Drug Administration	35,000.0	35,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Institutes of Health	230,000.0	156,370.7	0.0	0.0	73,629.3	0.0	0.0	0.0	0.0	0.0

TABLE 55

Preliminary federal obligations for R&D plant, by agency and R&D performer: FY 2020

(Dollars in thousands)

Agency	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
Department of the Interior	8,397.9	1,373.6	7,024.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bureau of Reclamation	1,150.0	1,150.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bureau of Safety and Environmental Enforcement	7,247.9	223.6	7,024.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Transportation	49,418.8	2,137.4	47,222.6	0.0	0.0	0.0	58.8	0.0	0.0	0.0
Federal Aviation Administration	47,682.8	2,137.4	45,486.6	0.0	0.0	0.0	58.8	0.0	0.0	0.0
Federal Railroad Administration	1,736.0	0.0	1,736.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Treasury	1,266.4	266.4	1,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bureau of Engraving and Printing	1,000.0	0.0	1,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Mint	266.4	266.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other agencies										
Environmental Protection Agency	4,499.0	0.0	4,499.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	86,347.0	55,100.0	26,159.8	0.0	0.0	1,561.1	0.0	0.0	0.0	3,526.1
National Science Foundation	554,280.0	9,801.0	88,441.0	0.0	310,739.5	0.0	144,299.2	0.0	999.2	0.0
Smithsonian Institution	32,560.0	32,560.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.**Note(s):**

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 56

Federal obligations for research performed at universities and colleges for selected agencies, by detailed field of science and engineering: FYs 2019–20

(Dollars in thousands)

Field	2019	2020 (preliminary)
All fields	31,637,052.5	33,578,471.6
Computer sciences and mathematics	1,630,520.6	1,693,423.7
Computer sciences	1,213,364.0	NA
Mathematics	348,429.3	NA
Other computer sciences and mathematics	68,727.3	NA
Engineering	3,014,313.7	3,245,369.3
Aeronautical engineering	136,418.7	NA
Astronautical engineering	16,063.8	NA
Chemical engineering	87,583.0	NA
Civil engineering	9,524.5	NA
Electrical engineering	209,891.9	NA
Mechanical engineering	107,575.6	NA
Metallurgy and materials engineering	363,432.7	NA
Other engineering	2,083,823.4	NA
Environmental sciences	1,330,355.6	1,355,897.9
Atmospheric sciences	151,831.0	NA
Geological sciences	156,827.3	NA
Oceanography	425,152.5	NA
Other environmental sciences	596,544.8	NA
Life sciences	20,025,580.1	21,309,231.4
Agricultural sciences	421,659.6	NA
Biological sciences (excluding environmental biology)	10,700,183.4	NA
Environmental biology	334,826.9	NA
Medical sciences	6,518,794.8	NA
Other life sciences	2,050,115.4	NA
Physical sciences	2,198,843.0	2,309,536.1
Astronomy	209,738.8	NA
Chemistry	521,424.8	NA
Physics	852,739.6	NA
Other physical sciences	614,939.7	NA
Psychology	1,613,264.7	1,725,393.7
Biological aspects	15,011.4	NA
Social aspects	12,825.9	NA
Other psychological sciences	1,585,427.4	NA
Social sciences	377,091.2	406,531.9
Anthropology	19,765.8	NA
Economics	83,407.6	NA
Political science	10,281.0	NA
Sociology	31,205.3	NA
Other social sciences	232,431.6	NA
Other sciences nec	1,447,083.6	1,533,087.5

NA = not available; data were not collected at that level for that fiscal year.

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Research obligations of these seven agencies represented more than 97% of total federal research obligations to universities and colleges in FYs 2019–20. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 57

Federal obligations for research performed at universities and colleges, by selected agency and field of science and engineering: FY 2019

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
All agencies surveyed	31,637,052.5	1,630,520.6	3,014,313.7	1,330,355.6	20,025,580.1	2,198,843.0	1,613,264.7	377,091.2	1,447,083.6
Departments									
Department of Agriculture	892,674.3	761.7	48,308.1	9,444.5	728,889.6	18,958.9	0.0	86,311.4	0.0
Agricultural Research Service	114,586.6	149.0	1,031.3	504.2	105,270.7	7,356.5	0.0	275.0	0.0
Animal and Plant Health Inspection Service	5,226.3	0.0	0.0	0.0	5,226.3	0.0	0.0	0.0	0.0
Economic Research Service	3,680.9	0.0	0.0	0.0	0.0	0.0	0.0	3,680.9	0.0
Forest Service	17,757.8	359.3	1,271.0	4,413.5	8,930.3	191.0	0.0	2,592.7	0.0
National Agricultural Statistics Service	253.4	253.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Institute of Food and Agriculture	750,056.7	0.0	46,005.8	4,526.8	609,462.3	11,411.5	0.0	78,650.3	0.0
Rural Business-Cooperative Service	1,112.5	0.0	0.0	0.0	0.0	0.0	0.0	1,112.5	0.0
Department of Defense	2,161,454.0	507,658.7	547,355.5	115,850.6	249,790.0	271,978.5	19,559.7	21,377.9	427,883.1
Defense Advanced Research Projects Agency	557,742.7	287,135.3	70,276.7	2,677.2	144,166.0	49,581.9	0.0	0.0	3,905.7
Department of the Air Force	470,109.0	75,627.2	202,947.4	6,281.8	33,553.4	148,459.1	639.4	2,600.6	0.0
Department of the Army	353,464.6	13,397.4	12,671.9	905.6	20,553.4	13,913.5	0.0	2,306.1	289,716.7
Department of the Navy	604,724.2	98,574.5	223,373.2	101,392.8	27,076.9	15,419.1	14,956.3	4,373.0	119,558.4
Other defense agencies	175,413.5	32,924.3	38,086.3	4,593.3	24,440.3	44,605.0	3,963.9	12,098.1	14,702.3
Department of Energy	1,248,555.3	22,150.9	418,575.5	33,676.7	146,341.0	551,868.3	0.0	0.0	75,943.0
Advanced Research Projects Agency—Energy	81,578.5	8,886.3	43,489.2	0.0	8,567.2	20,635.8	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	10,317.5	0.0	10,317.5	0.0	0.0	0.0	0.0	0.0	0.0
Energy Efficiency and Renewable Energy	307,763.4	0.0	307,763.4	0.0	0.0	0.0	0.0	0.0	0.0
Environmental Management	4,644.5	0.0	0.0	4,644.5	0.0	0.0	0.0	0.0	0.0
Fossil Energy	33,000.0	0.0	0.0	0.0	0.0	33,000.0	0.0	0.0	0.0
National Nuclear Security Administration	14,726.4	0.0	275.0	0.0	0.0	14,451.4	0.0	0.0	0.0
Defense Programs	975.0	0.0	275.0	0.0	0.0	700.0	0.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	13,751.4	0.0	0.0	0.0	0.0	13,751.4	0.0	0.0	0.0
Nuclear Energy	21,267.3	0.0	21,267.3	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 57

Federal obligations for research performed at universities and colleges, by selected agency and field of science and engineering: FY 2019

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Office of Cybersecurity, Energy Security, and Emergency Response	3,500.0	0.0	3,500.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Science	771,757.8	13,264.6	31,963.1	29,032.2	137,773.8	483,781.1	0.0	0.0	75,943.0
Department of Health and Human Services	21,489,376.5	55,731.0	1,007,088.0	234,848.6	18,200,575.3	66,875.6	1,558,212.4	97,622.3	268,423.3
Administration for Community Living	53,478.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53,478.7
Agency for Healthcare Research and Quality	100,708.7	1,827.9	433.0	0.0	77,447.9	0.0	0.0	10,152.3	10,847.7
Centers for Disease Control and Prevention	122,643.2	0.0	0.0	39,531.8	69,792.9	0.0	0.0	0.0	13,318.6
Centers for Medicare and Medicaid Services	11,554.7	0.0	0.0	0.0	11,554.7	0.0	0.0	0.0	0.0
Food and Drug Administration	72,300.0	0.0	0.0	0.0	72,300.0	0.0	0.0	0.0	0.0
Health Resources and Services Administration	24,027.6	0.0	0.0	0.0	10,953.9	0.0	0.0	2,265.5	10,808.1
National Institutes of Health	21,102,517.9	53,903.1	1,006,655.0	195,316.8	17,958,525.9	66,875.6	1,558,212.4	83,058.8	179,970.2
Office of the Secretary of Health and Human Services	2,145.7	0.0	0.0	0.0	0.0	0.0	0.0	2,145.7	0.0
Office of the Assistant Secretary for Planning and Evaluation	2,145.7	0.0	0.0	0.0	0.0	0.0	0.0	2,145.7	0.0
Department of Homeland Security	21,998.4	2,103.2	12,976.3	0.0	462.0	804.9	0.0	0.0	5,652.0
Countering Weapons of Mass Destruction Office	5,602.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,602.7
Cybersecurity and Infrastructure Security Agency	1,173.8	1,173.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Science and Technology Directorate	15,118.8	826.3	12,976.3	0.0	462.0	804.9	0.0	0.0	49.3
U.S. Coast Guard	103.2	103.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other agencies									
National Aeronautics and Space Administration	904,273.8	0.0	81,654.2	251,658.7	49,741.2	506,763.3	0.0	0.0	14,456.4
National Science Foundation	4,918,720.1	1,042,115.2	898,356.2	684,876.5	649,780.9	781,593.4	35,492.6	171,779.5	654,725.8

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Research obligations of these seven agencies represented more than 97% of total federal research obligations to universities and colleges in FY 2019. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 58

Preliminary federal obligations for research performed at universities and colleges, by selected agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
All agencies surveyed	33,578,471.6	1,693,423.7	3,245,369.3	1,355,897.9	21,309,231.4	2,309,536.1	1,725,393.7	406,531.9	1,533,087.5
Departments									
Department of Agriculture	1,009,782.4	720.3	61,857.2	10,188.2	816,671.9	18,471.9	0.0	101,872.8	0.0
Agricultural Research Service	85,940.0	111.7	773.5	378.1	78,953.1	5,517.3	0.0	206.3	0.0
Animal and Plant Health Inspection Service	5,300.9	0.0	0.0	0.0	5,300.9	0.0	0.0	0.0	0.0
Economic Research Service	3,680.0	0.0	0.0	0.0	0.0	0.0	0.0	3,680.0	0.0
Foreign Agricultural Service	500.0	0.0	0.0	0.0	500.0	0.0	0.0	0.0	0.0
Forest Service	17,757.8	359.3	1,271.0	4,413.5	8,930.3	191.0	0.0	2,592.7	0.0
National Agricultural Statistics Service	249.3	249.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Institute of Food and Agriculture	895,205.4	0.0	59,812.8	5,396.6	722,987.7	12,763.6	0.0	94,244.7	0.0
Rural Business-Cooperative Service	1,149.2	0.0	0.0	0.0	0.0	0.0	0.0	1,149.2	0.0
Department of Defense	2,214,005.8	526,867.3	541,433.5	114,264.8	270,607.8	274,430.7	29,789.5	26,173.8	430,438.5
Defense Advanced Research Projects Agency	621,207.6	322,651.0	79,124.3	3,202.5	161,098.5	50,701.5	0.0	0.0	4,429.8
Department of the Air Force	444,464.4	70,026.3	198,157.1	5,891.8	31,007.2	136,441.1	584.2	2,356.6	0.0
Department of the Army	364,716.4	14,910.1	14,046.4	1,008.4	22,887.8	15,493.8	0.0	2,568.1	293,801.8
Department of the Navy	587,595.6	95,782.4	217,046.2	98,520.8	26,310.0	14,982.4	14,532.7	4,249.2	116,171.9
Other defense agencies	196,021.9	23,497.4	33,059.4	5,641.2	29,304.3	56,812.1	14,672.6	17,000.0	16,035.0
Department of Energy	1,448,088.7	34,812.2	508,267.0	20,762.0	141,986.3	611,587.2	0.0	0.0	130,674.0
Advanced Research Projects Agency—Energy	85,616.7	9,326.2	45,641.9	0.0	8,991.3	21,657.2	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	9,877.6	0.0	9,877.6	0.0	0.0	0.0	0.0	0.0	0.0
Energy Efficiency and Renewable Energy	374,640.0	0.0	374,640.0	0.0	0.0	0.0	0.0	0.0	0.0
Environmental Management	1,584.0	0.0	0.0	1,584.0	0.0	0.0	0.0	0.0	0.0
Fossil Energy	34,000.0	0.0	0.0	0.0	0.0	34,000.0	0.0	0.0	0.0
National Nuclear Security Administration	94,110.0	0.0	100.0	0.0	0.0	94,010.0	0.0	0.0	0.0
Defense Programs	80,360.0	0.0	100.0	0.0	0.0	80,260.0	0.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	13,750.0	0.0	0.0	0.0	0.0	13,750.0	0.0	0.0	0.0
Nuclear Energy	41,520.5	0.0	41,520.5	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 58

Preliminary federal obligations for research performed at universities and colleges, by selected agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Office of Science	806,740.0	25,486.0	36,487.0	19,178.0	132,995.0	461,920.0	0.0	0.0	130,674.0
Department of Health and Human Services	22,860,558.7	59,196.8	1,072,366.1	249,041.6	19,368,097.6	71,588.9	1,659,225.8	102,384.9	278,656.9
Administration for Community Living	52,282.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52,282.0
Agency for Healthcare Research and Quality	98,720.2	1,799.3	453.2	0.0	74,970.0	0.0	0.0	10,307.3	11,190.4
Centers for Disease Control and Prevention	128,812.6	0.0	0.0	41,063.1	74,874.1	378.0	0.0	300.0	12,197.5
Centers for Medicare and Medicaid Services	12,000.0	0.0	0.0	0.0	12,000.0	0.0	0.0	0.0	0.0
Food and Drug Administration	72,585.6	0.0	0.0	0.0	72,585.6	0.0	0.0	0.0	0.0
Health Resources and Services Administration	23,492.6	0.0	0.0	0.0	10,953.9	0.0	0.0	1,188.7	11,350.0
National Institutes of Health	22,470,520.0	57,397.5	1,071,912.9	207,978.5	19,122,714.1	71,210.9	1,659,225.8	88,443.2	191,637.1
Office of the Secretary of Health and Human Services	2,145.7	0.0	0.0	0.0	0.0	0.0	0.0	2,145.7	0.0
Office of the Assistant Secretary for Planning and Evaluation	2,145.7	0.0	0.0	0.0	0.0	0.0	0.0	2,145.7	0.0
Department of Homeland Security	21,280.0	2,000.0	13,000.0	0.0	1,000.0	1,000.0	0.0	0.0	4,280.0
Countering Weapons of Mass Destruction Office	4,280.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4,280.0
Science and Technology Directorate	17,000.0	2,000.0	13,000.0	0.0	1,000.0	1,000.0	0.0	0.0	0.0
Other agencies									
National Aeronautics and Space Administration	975,821.5	0.0	125,630.9	259,586.5	44,798.1	531,200.7	0.0	0.0	14,605.3
National Science Foundation	5,048,934.4	1,069,827.2	922,814.6	702,054.8	666,069.6	801,256.6	36,378.4	176,100.4	674,432.8

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Research obligations of these seven agencies represented more than 97% of total federal research obligations to universities and colleges in FY 2020. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 59

Federal obligations for research performed at universities and colleges in computer sciences and mathematics, by selected agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Computer sciences	Mathematics	Other computer sciences and mathematics
All agencies surveyed	1,630,520.6	1,213,364.0	348,429.3	68,727.3
Departments				
Department of Agriculture	761.7	403.3	358.4	0.0
Agricultural Research Service	149.0	149.0	0.0	0.0
Forest Service	359.3	254.3	105.0	0.0
National Agricultural Statistics Service	253.4	0.0	253.4	0.0
Department of Defense	507,658.7	372,352.2	66,682.2	68,624.2
Defense Advanced Research Projects Agency	287,135.3	249,639.9	2,890.5	34,604.9
Department of the Air Force	75,627.2	21,443.2	24,881.1	29,302.9
Department of the Army	13,397.4	3,231.4	10,166.0	0.0
Department of the Navy	98,574.5	80,807.6	17,205.6	561.3
Other defense agencies	32,924.3	17,230.1	11,539.0	4,155.1
Department of Energy	22,150.9	21,927.0	223.9	0.0
Advanced Research Projects Agency—Energy	8,886.3	8,886.3	0.0	0.0
Office of Science	13,264.6	13,040.7	223.9	0.0
Department of Health and Human Services	55,731.0	1,827.9	53,903.1	0.0
Agency for Healthcare Research and Quality	1,827.9	1,827.9	0.0	0.0
National Institutes of Health	53,903.1	0.0	53,903.1	0.0
Department of Homeland Security	2,103.2	2,000.1	0.0	103.2
Cybersecurity and Infrastructure Security Agency	1,173.8	1,173.8	0.0	0.0
Science and Technology Directorate	826.3	826.3	0.0	0.0
U.S. Coast Guard	103.2	0.0	0.0	103.2
Other agencies				
National Science Foundation	1,042,115.2	814,853.5	227,261.6	0.0

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Research obligations of these seven agencies represented more than 97% of total federal research obligations to universities and colleges in FY 2019. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 60

Federal obligations for research performed at universities and colleges in engineering, by selected agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Aeronautical engineering	Astronautical engineering	Chemical engineering	Civil engineering	Electrical engineering	Mechanical engineering	Metallurgy and materials engineering	Other engineering
Office of Cybersecurity, Energy Security, and Emergency Response	3,500.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3,500.0
Office of Science	31,963.1	0.0	0.0	0.0	0.0	0.0	0.0	31,963.1	0.0
Department of Health and Human Services	1,007,088.0	0.0	0.0	0.0	0.0	0.0	0.0	13,014.9	994,073.1
Agency for Healthcare Research and Quality	433.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	433.0
National Institutes of Health	1,006,655.0	0.0	0.0	0.0	0.0	0.0	0.0	13,014.9	993,640.1
Department of Homeland Security	12,976.3	0.0	0.0	271.0	0.0	0.0	0.0	0.0	12,705.3
Science and Technology Directorate	12,976.3	0.0	0.0	271.0	0.0	0.0	0.0	0.0	12,705.3
Other agencies									
National Aeronautics and Space Administration	81,654.2	38,178.7	6,392.0	0.0	0.0	0.0	0.0	34.9	37,048.6
National Science Foundation	898,356.2	0.0	0.0	61,518.7	5,027.9	112,817.7	62,074.1	182,845.0	474,072.8

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Research obligations of these seven agencies represented more than 97% of total federal research obligations to universities and colleges in FY 2019. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 61

Federal obligations for research performed at universities and colleges in environmental sciences, by selected agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Atmospheric sciences	Geological sciences	Oceanography	Other environmental sciences
All agencies surveyed	1,330,355.6	151,831.0	156,827.3	425,152.5	596,544.8
Departments					
Department of Agriculture	9,444.5	5,825.6	11.5	0.0	3,607.5
Agricultural Research Service	504.2	492.7	11.5	0.0	0.0
Forest Service	4,413.5	806.0	0.0	0.0	3,607.5
National Institute of Food and Agriculture	4,526.8	4,526.8	0.0	0.0	0.0
Department of Defense	115,850.6	4,526.3	966.9	104,454.3	5,903.0
Defense Advanced Research Projects Agency	2,677.2	0.0	0.0	2,677.2	0.0
Department of the Air Force	6,281.8	2,642.4	47.6	0.0	3,591.7
Department of the Army	905.6	0.0	717.4	0.0	188.1
Department of the Navy	101,392.8	0.0	0.0	99,269.6	2,123.2
Other defense agencies	4,593.3	1,883.9	201.8	2,507.6	0.0
Department of Energy	33,676.7	21,910.7	0.0	0.0	11,766.0
Environmental Management	4,644.5	0.0	0.0	0.0	4,644.5
Office of Science	29,032.2	21,910.7	0.0	0.0	7,121.5
Department of Health and Human Services	234,848.6	0.0	0.0	0.0	234,848.6
Centers for Disease Control and Prevention	39,531.8	0.0	0.0	0.0	39,531.8
National Institutes of Health	195,316.8	0.0	0.0	0.0	195,316.8
Other agencies					
National Aeronautics and Space Administration	251,658.7	0.0	0.0	0.0	251,658.7
National Science Foundation	684,876.5	119,568.3	155,848.9	320,698.2	88,761.0

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Research obligations of these seven agencies represented more than 97% of total federal research obligations to universities and colleges in FY 2019. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 62

Federal obligations for research performed at universities and colleges in life sciences, by selected agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Agricultural sciences	Biological sciences (excluding environmental biology)	Environmental biology	Medical sciences	Other life sciences
All agencies surveyed	20,025,580.1	421,659.6	10,700,183.4	334,826.9	6,518,794.8	2,050,115.4
Departments						
Department of Agriculture	728,889.6	408,579.4	169,698.1	143,531.3	6,860.9	220.0
Agricultural Research Service	105,270.7	81,780.5	7,333.5	14,289.0	1,867.8	0.0
Animal and Plant Health Inspection Service	5,226.3	5,226.3	0.0	0.0	0.0	0.0
Forest Service	8,930.3	296.0	3,593.1	4,821.1	0.0	220.0
National Institute of Food and Agriculture	609,462.3	321,276.6	158,771.4	124,421.2	4,993.1	0.0
Department of Defense	249,790.0	4,513.0	121,693.9	19,525.9	88,464.4	15,592.8
Defense Advanced Research Projects Agency	144,166.0	0.0	65,845.9	19,513.2	58,806.8	0.0
Department of the Air Force	33,553.4	2,629.1	18,107.4	12.7	48.0	12,756.2
Department of the Army	20,553.4	0.0	5,301.4	0.0	15,252.0	0.0
Department of the Navy	27,076.9	0.0	11,665.3	0.0	13,836.6	1,575.0
Other defense agencies	24,440.3	1,883.9	20,773.9	0.0	521.0	1,261.6
Department of Energy	146,341.0	8,567.2	116,571.8	21,202.0	0.0	0.0
Advanced Research Projects Agency—Energy	8,567.2	8,567.2	0.0	0.0	0.0	0.0
Office of Science	137,773.8	0.0	116,571.8	21,202.0	0.0	0.0
Department of Health and Human Services	18,200,575.3	0.0	9,792,544.3	0.0	6,423,469.6	1,984,561.4
Agency for Healthcare Research and Quality	77,447.9	0.0	0.0	0.0	76,256.0	1,191.9
Centers for Disease Control and Prevention	69,792.9	0.0	610.4	0.0	14,111.1	55,071.4
Centers for Medicare and Medicaid Services	11,554.7	0.0	0.0	0.0	11,554.7	0.0
Food and Drug Administration	72,300.0	0.0	72,300.0	0.0	0.0	0.0
Health Resources and Services Administration	10,953.9	0.0	0.0	0.0	10,953.9	0.0
National Institutes of Health	17,958,525.9	0.0	9,719,633.9	0.0	6,310,593.9	1,928,298.1
Department of Homeland Security	462.0	0.0	462.0	0.0	0.0	0.0
Science and Technology Directorate	462.0	0.0	462.0	0.0	0.0	0.0
Other agencies						
National Aeronautics and Space Administration	49,741.2	0.0	0.0	0.0	0.0	49,741.2
National Science Foundation	649,780.9	0.0	499,213.3	150,567.7	0.0	0.0

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Research obligations of these seven agencies represented more than 97% of total federal research obligations to universities and colleges in FY 2019. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 63

Federal obligations for research performed at universities and colleges in physical sciences, by selected agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Astronomy	Chemistry	Physics	Other physical sciences
All agencies surveyed	2,198,843.0	209,738.8	521,424.8	852,739.6	614,939.7
Departments					
Department of Agriculture	18,958.9	0.0	18,683.9	275.0	0.0
Agricultural Research Service	7,356.5	0.0	7,081.5	275.0	0.0
Forest Service	191.0	0.0	191.0	0.0	0.0
National Institute of Food and Agriculture	11,411.5	0.0	11,411.5	0.0	0.0
Department of Defense	271,978.5	685.2	58,313.6	194,294.1	18,685.6
Defense Advanced Research Projects Agency	49,581.9	0.0	14,862.9	34,718.9	0.0
Department of the Air Force	148,459.1	120.2	12,217.1	126,571.4	9,550.4
Department of the Army	13,913.5	0.0	5,265.4	5,173.4	3,474.7
Department of the Navy	15,419.1	565.0	4,021.1	5,172.6	5,660.5
Other defense agencies	44,605.0	0.0	21,947.1	22,657.8	0.0
Department of Energy	551,868.3	0.0	139,467.0	398,649.9	13,751.4
Advanced Research Projects Agency—Energy	20,635.8	0.0	10,728.5	9,907.2	0.0
Fossil Energy	33,000.0	0.0	33,000.0	0.0	0.0
National Nuclear Security Administration	14,451.4	0.0	0.0	700.0	13,751.4
Defense Programs	700.0	0.0	0.0	700.0	0.0
Office of Defense Nuclear Nonproliferation	13,751.4	0.0	0.0	0.0	13,751.4
Office of Science	483,781.1	0.0	95,738.5	388,042.7	0.0
Department of Health and Human Services	66,875.6	0.0	65,860.4	0.0	1,015.2
National Institutes of Health	66,875.6	0.0	65,860.4	0.0	1,015.2
Department of Homeland Security	804.9	0.0	699.4	0.0	105.5
Science and Technology Directorate	804.9	0.0	699.4	0.0	105.5
Other agencies					
National Aeronautics and Space Administration	506,763.3	118,991.2	0.0	1,714.4	386,057.7
National Science Foundation	781,593.4	90,062.4	238,400.5	257,806.2	195,324.4

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Research obligations of these seven agencies represented more than 97% of total federal research obligations to universities and colleges in FY 2019. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 64

Federal obligations for research performed at universities and colleges in psychology, by selected agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Biological aspects	Social aspects	Other psychological sciences
All agencies surveyed	1,613,264.7	15,011.4	12,825.9	1,585,427.4
Departments				
Department of Defense	19,559.7	3,869.4	5,723.7	9,966.6
Department of the Air Force	639.4	0.0	277.7	361.7
Department of the Navy	14,956.3	1,989.4	3,565.7	9,401.3
Other defense agencies	3,963.9	1,880.1	1,880.2	203.6
Department of Health and Human Services	1,558,212.4	0.0	0.0	1,558,212.4
National Institutes of Health	1,558,212.4	0.0	0.0	1,558,212.4
Other agencies				
National Science Foundation	35,492.6	11,142.0	7,102.2	17,248.4

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Research obligations of these seven agencies represented more than 97% of total federal research obligations to universities and colleges in FY 2019. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 65

Federal obligations for research performed at universities and colleges in social sciences, by selected agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Anthropology	Economics	Political science	Sociology	Other social sciences
All agencies surveyed	377,091.2	19,765.8	83,407.6	10,281.0	31,205.3	232,431.6
Departments						
Department of Agriculture	86,311.4	0.0	62,189.9	0.0	23,020.8	1,100.8
Agricultural Research Service	275.0	0.0	275.0	0.0	0.0	0.0
Economic Research Service	3,680.9	0.0	3,680.9	0.0	0.0	0.0
Forest Service	2,592.7	0.0	1,100.4	0.0	391.6	1,100.8
National Institute of Food and Agriculture	78,650.3	0.0	56,021.1	0.0	22,629.2	0.0
Rural Business-Cooperative Service	1,112.5	0.0	1,112.5	0.0	0.0	0.0
Department of Defense	21,377.9	0.0	0.0	0.0	0.0	21,377.9
Department of the Air Force	2,600.6	0.0	0.0	0.0	0.0	2,600.6
Department of the Army	2,306.1	0.0	0.0	0.0	0.0	2,306.1
Department of the Navy	4,373.0	0.0	0.0	0.0	0.0	4,373.0
Other defense agencies	12,098.1	0.0	0.0	0.0	0.0	12,098.1
Department of Health and Human Services	97,622.3	36.1	3,429.1	0.0	0.0	94,157.1
Agency for Healthcare Research and Quality	10,152.3	36.1	3,429.1	0.0	0.0	6,687.1
Health Resources and Services Administration	2,265.5	0.0	0.0	0.0	0.0	2,265.5
National Institutes of Health	83,058.8	0.0	0.0	0.0	0.0	83,058.8
Office of the Secretary of Health and Human Services	2,145.7	0.0	0.0	0.0	0.0	2,145.7
Office of the Assistant Secretary for Planning and Evaluation	2,145.7	0.0	0.0	0.0	0.0	2,145.7
Other agencies						
National Science Foundation	171,779.5	19,729.7	17,788.5	10,281.0	8,184.5	115,795.8

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Research obligations of these seven agencies represented more than 97% of total federal research obligations to universities and colleges in FY 2019. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 66

Federal obligations for basic research performed at universities and colleges for selected agencies, by detailed field of science and engineering: FYs 2019–20

(Dollars in thousands)

Field	2019	2020 (preliminary)
All fields	18,559,376.1	19,564,280.8
Computer sciences and mathematics	1,245,400.4	1,268,154.2
Computer sciences	871,785.0	NA
Mathematics	319,780.6	NA
Other computer sciences and mathematics	53,834.8	NA
Engineering	1,665,537.0	1,712,355.2
Aeronautical engineering	49,996.4	NA
Astronautical engineering	3,995.0	NA
Chemical engineering	59,208.3	NA
Civil engineering	7,564.8	NA
Electrical engineering	129,031.4	NA
Mechanical engineering	68,223.2	NA
Metallurgy and materials engineering	293,421.9	NA
Other engineering	1,054,095.8	NA
Environmental sciences	1,120,422.5	1,143,585.2
Atmospheric sciences	146,686.3	NA
Geological sciences	156,543.7	NA
Oceanography	388,637.5	NA
Other environmental sciences	428,555.1	NA
Life sciences	10,480,308.5	11,185,886.6
Agricultural sciences	167,634.7	NA
Biological sciences (excluding environmental biology)	5,763,358.7	NA
Environmental biology	232,734.8	NA
Medical sciences	3,293,161.7	NA
Other life sciences	1,023,418.5	NA
Physical sciences	2,080,811.6	2,113,696.4
Astronomy	208,675.7	NA
Chemistry	454,985.6	NA
Physics	822,093.8	NA
Other physical sciences	595,056.5	NA
Psychology	853,894.4	922,785.6
Biological aspects	15,011.4	NA
Social aspects	9,260.2	NA
Other psychological sciences	829,622.9	NA
Social sciences	261,289.2	278,863.8
Anthropology	19,729.7	NA
Economics	37,568.7	NA
Political science	10,281.0	NA
Sociology	16,154.8	NA
Other social sciences	177,555.1	NA
Other sciences nec	851,712.3	938,953.7

NA = not available; data were not collected at that level for that fiscal year.

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Basic research obligations of these seven agencies represented more than 99% of total federal basic research obligations to universities and colleges in FYs 2019–20. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 67

Federal obligations for basic research performed at universities and colleges, by selected agency and field of science and engineering: FY 2019

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
All agencies surveyed	18,559,376.1	1,245,400.4	1,665,537.0	1,120,422.5	10,480,308.5	2,080,811.6	853,894.4	261,289.2	851,712.3
Departments									
Department of Agriculture	334,000.0	128.1	16,800.1	2,957.9	278,125.3	8,165.9	0.0	27,822.6	0.0
Agricultural Research Service	63,659.2	82.8	572.9	280.1	58,483.7	4,086.9	0.0	152.8	0.0
Animal and Plant Health Inspection Service	5,226.3	0.0	0.0	0.0	5,226.3	0.0	0.0	0.0	0.0
Forest Service	2,594.6	45.3	125.2	1,093.4	1,103.5	85.0	0.0	142.2	0.0
National Institute of Food and Agriculture	262,519.9	0.0	16,102.0	1,584.4	213,311.8	3,994.0	0.0	27,527.6	0.0
Department of Defense	1,373,405.5	285,471.9	333,293.0	76,055.5	148,416.9	241,236.3	15,922.4	21,377.9	251,631.6
Defense Advanced Research Projects Agency	242,713.7	109,946.8	26,091.3	0.0	59,949.4	45,447.3	0.0	0.0	1,278.9
Department of the Air Force	360,521.0	66,747.1	118,393.0	5,097.6	29,977.0	137,094.8	610.8	2,600.6	0.0
Department of the Army	237,941.9	13,361.5	12,413.3	905.6	20,553.4	13,913.5	0.0	2,306.1	174,488.5
Department of the Navy	391,695.2	66,770.7	141,543.9	65,459.0	23,248.1	12,184.7	11,349.7	4,373.0	66,766.0
Other defense agencies	140,533.9	28,645.8	34,851.5	4,593.3	14,689.0	32,596.2	3,961.9	12,098.1	9,098.1
Department of Energy	820,246.5	13,264.6	33,700.5	29,032.2	137,773.8	530,532.5	0.0	0.0	75,943.0
Electricity Delivery and Energy Reliability	1,737.4	0.0	1,737.4	0.0	0.0	0.0	0.0	0.0	0.0
Fossil Energy	33,000.0	0.0	0.0	0.0	0.0	33,000.0	0.0	0.0	0.0
National Nuclear Security Administration	13,751.4	0.0	0.0	0.0	0.0	13,751.4	0.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	13,751.4	0.0	0.0	0.0	0.0	13,751.4	0.0	0.0	0.0
Office of Science	771,757.8	13,264.6	31,963.1	29,032.2	137,773.8	483,781.1	0.0	0.0	75,943.0
Department of Health and Human Services	10,899,722.8	27,760.1	518,427.3	115,450.8	9,252,385.8	34,440.9	802,479.4	42,775.3	106,003.2
Centers for Disease Control and Prevention	31,926.1	0.0	0.0	14,862.6	3,744.9	0.0	0.0	0.0	13,318.6
National Institutes of Health	10,867,796.7	27,760.1	518,427.3	100,588.1	9,248,640.9	34,440.9	802,479.4	42,775.3	92,684.7
Department of Homeland Security	19,642.7	435.5	12,976.3	0.0	0.0	804.9	0.0	0.0	5,426.0

TABLE 67

Federal obligations for basic research performed at universities and colleges, by selected agency and field of science and engineering: FY 2019

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Countering Weapons of Mass Destruction Office	5,376.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,376.7
Science and Technology Directorate	14,266.0	435.5	12,976.3	0.0	0.0	804.9	0.0	0.0	49.3
Other agencies									
National Aeronautics and Space Administration	735,394.5	0.0	0.0	218,350.2	19,124.5	495,510.4	0.0	0.0	2,409.4
National Science Foundation	4,376,964.0	918,340.2	750,339.8	678,575.9	644,482.3	770,120.6	35,492.6	169,313.5	410,299.1

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Basic research obligations of these seven agencies represented more than 99% of total federal basic research obligations to universities and colleges in FY 2019. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 68

Preliminary federal obligations for basic research performed at universities and colleges, by selected agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
All agencies surveyed	19,564,280.8	1,268,154.2	1,712,355.2	1,143,585.2	11,185,886.6	2,113,696.4	922,785.6	278,863.8	938,953.7
Departments									
Department of Agriculture	369,523.9	107.4	21,526.9	3,195.7	303,766.8	7,625.5	0.0	33,301.6	0.0
Agricultural Research Service	47,744.4	62.1	429.7	210.1	43,862.8	3,065.2	0.0	114.6	0.0
Animal and Plant Health Inspection Service	5,300.9	0.0	0.0	0.0	5,300.9	0.0	0.0	0.0	0.0
Forest Service	2,594.6	45.3	125.2	1,093.4	1,103.5	85.0	0.0	142.2	0.0
National Institute of Food and Agriculture	313,884.0	0.0	20,972.0	1,892.2	253,499.7	4,475.3	0.0	33,044.8	0.0
Department of Defense	1,381,210.2	270,547.6	314,761.9	74,873.7	154,524.1	244,593.3	26,252.3	26,173.8	269,483.6
Defense Advanced Research Projects Agency	244,359.8	110,692.5	26,268.3	0.0	60,355.9	45,755.5	0.0	0.0	1,287.5
Department of the Air Force	326,682.6	60,482.2	107,280.7	4,619.2	27,163.4	124,227.1	553.5	2,356.6	0.0
Department of the Army	264,967.1	14,879.1	13,823.2	1,008.4	22,887.8	15,493.8	0.0	2,568.1	194,306.7
Department of the Navy	380,600.5	64,879.5	137,534.7	63,604.9	22,589.6	11,839.5	11,028.2	4,249.2	64,874.9
Other defense agencies	164,600.3	19,614.4	29,855.1	5,641.2	21,527.3	47,277.4	14,670.6	17,000.0	9,014.4
Department of Energy	856,316.9	25,486.0	38,313.9	19,178.0	132,995.0	509,670.0	0.0	0.0	130,674.0
Electricity Delivery and Energy Reliability	1,826.9	0.0	1,826.9	0.0	0.0	0.0	0.0	0.0	0.0
Fossil Energy	34,000.0	0.0	0.0	0.0	0.0	34,000.0	0.0	0.0	0.0
National Nuclear Security Administration	13,750.0	0.0	0.0	0.0	0.0	13,750.0	0.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	13,750.0	0.0	0.0	0.0	0.0	13,750.0	0.0	0.0	0.0
Office of Science	806,740.0	25,486.0	36,487.0	19,178.0	132,995.0	461,920.0	0.0	0.0	130,674.0
Department of Health and Human Services	11,681,398.6	29,755.3	555,687.6	123,880.2	9,917,611.2	36,916.3	860,154.9	45,849.6	111,543.5
Centers for Disease Control and Prevention	32,514.7	0.0	0.0	16,062.6	4,254.6	0.0	0.0	0.0	12,197.5
National Institutes of Health	11,648,883.9	29,755.3	555,687.6	107,817.6	9,913,356.5	36,916.3	860,154.9	45,849.6	99,346.1
Department of Homeland Security	19,280.0	1,000.0	13,000.0	0.0	0.0	1,000.0	0.0	0.0	4,280.0

TABLE 68

Preliminary federal obligations for basic research performed at universities and colleges, by selected agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Countering Weapons of Mass Destruction Office	4,280.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4,280.0
Science and Technology Directorate	15,000.0	1,000.0	13,000.0	0.0	0.0	1,000.0	0.0	0.0	0.0
Other agencies									
National Aeronautics and Space Administration	770,357.7	0.0	0.0	226,947.5	16,423.9	524,552.0	0.0	0.0	2,434.2
National Science Foundation	4,486,193.6	941,257.9	769,064.9	695,510.1	660,565.7	789,339.4	36,378.4	173,538.8	420,538.3

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Basic research obligations of these seven agencies represented more than 99% of total federal basic research obligations to universities and colleges in FY 2020. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 69

Federal obligations for basic research performed at universities and colleges in computer sciences and mathematics, by selected agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Computer sciences	Mathematics	Other computer sciences and mathematics
All agencies surveyed	1,245,400.4	871,785.0	319,780.6	53,834.8
Departments				
Department of Agriculture	128.1	113.1	15.0	0.0
Agricultural Research Service	82.8	82.8	0.0	0.0
Forest Service	45.3	30.3	15.0	0.0
Department of Defense	285,471.9	166,826.1	64,811.1	53,834.8
Defense Advanced Research Projects Agency	109,946.8	84,071.8	2,890.5	22,984.5
Department of the Air Force	66,747.1	15,453.8	24,646.1	26,647.2
Department of the Army	13,361.5	3,195.5	10,166.0	0.0
Department of the Navy	66,770.7	50,766.7	15,569.4	434.6
Other defense agencies	28,645.8	13,338.3	11,539.0	3,768.4
Department of Energy	13,264.6	13,040.7	223.9	0.0
Office of Science	13,264.6	13,040.7	223.9	0.0
Department of Health and Human Services	27,760.1	0.0	27,760.1	0.0
National Institutes of Health	27,760.1	0.0	27,760.1	0.0
Department of Homeland Security	435.5	435.5	0.0	0.0
Science and Technology Directorate	435.5	435.5	0.0	0.0
Other agencies				
National Science Foundation	918,340.2	691,369.7	226,970.5	0.0

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Basic research obligations of these seven agencies represented more than 99% of total federal basic research obligations to universities and colleges in FY 2019. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 70

Federal obligations for basic research performed at universities and colleges in engineering, by selected agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Aeronautical engineering	Astronautical engineering	Chemical engineering	Civil engineering	Electrical engineering	Mechanical engineering	Metallurgy and materials engineering	Other engineering
National Science Foundation	750,339.8	0.0	0.0	48,871.8	4,050.3	92,000.8	49,720.4	180,499.5	375,197.0

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Basic research obligations of these seven agencies represented more than 99% of total federal basic research obligations to universities and colleges in FY 2019. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 71

Federal obligations for basic research performed at universities and colleges in environmental sciences, by selected agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Atmospheric sciences	Geological sciences	Oceanography	Other environmental sciences
All agencies surveyed	1,120,422.5	146,686.3	156,543.7	388,637.5	428,555.1
Departments					
Department of Agriculture	2,957.9	1,993.1	6.4	0.0	958.5
Agricultural Research Service	280.1	273.7	6.4	0.0	0.0
Forest Service	1,093.4	135.0	0.0	0.0	958.5
National Institute of Food and Agriculture	1,584.4	1,584.4	0.0	0.0	0.0
Department of Defense	76,055.5	3,357.6	966.2	67,966.6	3,765.1
Department of the Air Force	5,097.6	1,473.7	46.9	0.0	3,577.0
Department of the Army	905.6	0.0	717.4	0.0	188.1
Department of the Navy	65,459.0	0.0	0.0	65,459.0	0.0
Other defense agencies	4,593.3	1,883.9	201.8	2,507.6	0.0
Department of Energy	29,032.2	21,910.7	0.0	0.0	7,121.5
Office of Science	29,032.2	21,910.7	0.0	0.0	7,121.5
Department of Health and Human Services	115,450.8	0.0	0.0	0.0	115,450.8
Centers for Disease Control and Prevention	14,862.6	0.0	0.0	0.0	14,862.6
National Institutes of Health	100,588.1	0.0	0.0	0.0	100,588.1
Other agencies					
National Aeronautics and Space Administration	218,350.2	0.0	0.0	0.0	218,350.2
National Science Foundation	678,575.9	119,424.8	155,571.1	320,671.0	82,909.0

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Basic research obligations of these seven agencies represented more than 99% of total federal basic research obligations to universities and colleges in FY 2019. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 72

Federal obligations for basic research performed at universities and colleges in life sciences, by selected agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Agricultural sciences	Biological sciences (excluding environmental biology)	Environmental biology	Medical sciences	Other life sciences
All agencies surveyed	10,480,308.5	167,634.7	5,763,358.7	232,734.8	3,293,161.7	1,023,418.5
Departments						
Department of Agriculture	278,125.3	163,121.7	59,969.4	52,216.5	2,785.2	32.5
Agricultural Research Service	58,483.7	45,433.6	4,074.2	7,938.3	1,037.6	0.0
Animal and Plant Health Inspection Service	5,226.3	5,226.3	0.0	0.0	0.0	0.0
Forest Service	1,103.5	15.0	325.3	730.7	0.0	32.5
National Institute of Food and Agriculture	213,311.8	112,446.8	55,570.0	43,547.4	1,747.6	0.0
Department of Defense	148,416.9	4,513.0	87,011.7	8,796.1	36,908.1	11,187.9
Defense Advanced Research Projects Agency	59,949.4	0.0	42,169.1	8,783.4	8,996.9	0.0
Department of the Air Force	29,977.0	2,629.1	17,750.5	12.7	45.9	9,538.8
Department of the Army	20,553.4	0.0	5,301.4	0.0	15,252.0	0.0
Department of the Navy	23,248.1	0.0	10,226.2	0.0	12,613.3	408.6
Other defense agencies	14,689.0	1,883.9	11,564.5	0.0	0.0	1,240.6
Department of Energy	137,773.8	0.0	116,571.8	21,202.0	0.0	0.0
Office of Science	137,773.8	0.0	116,571.8	21,202.0	0.0	0.0
Department of Health and Human Services	9,252,385.8	0.0	5,005,843.8	0.0	3,253,468.4	993,073.5
Centers for Disease Control and Prevention	3,744.9	0.0	232.3	0.0	3,512.6	0.0
National Institutes of Health	9,248,640.9	0.0	5,005,611.5	0.0	3,249,955.9	993,073.5
Other agencies						
National Aeronautics and Space Administration	19,124.5	0.0	0.0	0.0	0.0	19,124.5
National Science Foundation	644,482.3	0.0	493,962.0	150,520.3	0.0	0.0

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Basic research obligations of these seven agencies represented more than 99% of total federal basic research obligations to universities and colleges in FY 2019. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 73

Federal obligations for basic research performed at universities and colleges in physical sciences, by selected agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Astronomy	Chemistry	Physics	Other physical sciences
All agencies surveyed	2,080,811.6	208,675.7	454,985.6	822,093.8	595,056.5
Departments					
Department of Agriculture	8,165.9	0.0	8,013.2	152.8	0.0
Agricultural Research Service	4,086.9	0.0	3,934.1	152.8	0.0
Forest Service	85.0	0.0	85.0	0.0	0.0
National Institute of Food and Agriculture	3,994.0	0.0	3,994.0	0.0	0.0
Department of Defense	241,236.3	106.2	46,662.4	181,468.9	12,998.9
Defense Advanced Research Projects Agency	45,447.3	0.0	12,853.1	32,594.2	0.0
Department of the Air Force	137,094.8	106.2	11,785.1	119,494.3	5,709.2
Department of the Army	13,913.5	0.0	5,265.4	5,173.4	3,474.7
Department of the Navy	12,184.7	0.0	4,021.1	4,348.6	3,815.0
Other defense agencies	32,596.2	0.0	12,737.8	19,858.4	0.0
Department of Energy	530,532.5	0.0	128,738.5	388,042.7	13,751.4
Fossil Energy	33,000.0	0.0	33,000.0	0.0	0.0
National Nuclear Security Administration	13,751.4	0.0	0.0	0.0	13,751.4
Office of Defense Nuclear Nonproliferation	13,751.4	0.0	0.0	0.0	13,751.4
Office of Science	483,781.1	0.0	95,738.5	388,042.7	0.0
Department of Health and Human Services	34,440.9	0.0	33,918.1	0.0	522.8
National Institutes of Health	34,440.9	0.0	33,918.1	0.0	522.8
Department of Homeland Security	804.9	0.0	699.4	0.0	105.5
Science and Technology Directorate	804.9	0.0	699.4	0.0	105.5
Other agencies					
National Aeronautics and Space Administration	495,510.4	118,991.2	0.0	0.0	376,519.2
National Science Foundation	770,120.6	89,578.4	236,954.1	252,429.5	191,158.7

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Basic research obligations of these seven agencies represented more than 99% of total federal basic research obligations to universities and colleges in FY 2019. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 74

Federal obligations for basic research performed at universities and colleges in psychology, by selected agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Biological aspects	Social aspects	Other psychological sciences
All agencies surveyed	853,894.4	15,011.4	9,260.2	829,622.9
Departments				
Department of Defense	15,922.4	3,869.4	2,157.9	9,895.1
Department of the Air Force	610.8	0.0	277.7	333.1
Department of the Navy	11,349.7	1,989.4	0.0	9,360.3
Other defense agencies	3,961.9	1,880.1	1,880.2	201.6
Department of Health and Human Services	802,479.4	0.0	0.0	802,479.4
National Institutes of Health	802,479.4	0.0	0.0	802,479.4
Other agencies				
National Science Foundation	35,492.6	11,142.0	7,102.2	17,248.4

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Basic research obligations of these seven agencies represented more than 99% of total federal basic research obligations to universities and colleges in FY 2019. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 75

Federal obligations for basic research performed at universities and colleges in social sciences, by selected agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Anthropology	Economics	Political science	Sociology	Other social sciences
All agencies surveyed	261,289.2	19,729.7	37,568.7	10,281.0	16,154.8	177,555.1
Departments						
Department of Agriculture	27,822.6	0.0	19,780.2	0.0	7,970.2	72.2
Agricultural Research Service	152.8	0.0	152.8	0.0	0.0	0.0
Forest Service	142.2	0.0	20.0	0.0	50.0	72.2
National Institute of Food and Agriculture	27,527.6	0.0	19,607.4	0.0	7,920.2	0.0
Department of Defense	21,377.9	0.0	0.0	0.0	0.0	21,377.9
Department of the Air Force	2,600.6	0.0	0.0	0.0	0.0	2,600.6
Department of the Army	2,306.1	0.0	0.0	0.0	0.0	2,306.1
Department of the Navy	4,373.0	0.0	0.0	0.0	0.0	4,373.0
Other defense agencies	12,098.1	0.0	0.0	0.0	0.0	12,098.1
Department of Health and Human Services	42,775.3	0.0	0.0	0.0	0.0	42,775.3
National Institutes of Health	42,775.3	0.0	0.0	0.0	0.0	42,775.3
Other agencies						
National Science Foundation	169,313.5	19,729.7	17,788.5	10,281.0	8,184.5	113,329.7

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Basic research obligations of these seven agencies represented more than 99% of total federal basic research obligations to universities and colleges in FY 2019. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Science Foundation, National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 76

Federal obligations for applied research performed at universities and colleges for selected agencies, by detailed field of science and engineering: FYs 2019–20

(Dollars in thousands)

Field	2019	2020 (preliminary)
All fields	13,077,676.4	14,014,190.8
Computer sciences and mathematics	385,120.2	425,269.5
Computer sciences	341,579.0	NA
Mathematics	28,648.7	NA
Other computer sciences and mathematics	14,892.5	NA
Engineering	1,348,776.6	1,533,014.1
Aeronautical engineering	86,422.3	NA
Astronautical engineering	12,068.8	NA
Chemical engineering	28,374.6	NA
Civil engineering	1,959.7	NA
Electrical engineering	80,860.5	NA
Mechanical engineering	39,352.4	NA
Metallurgy and materials engineering	70,010.8	NA
Other engineering	1,029,727.6	NA
Environmental sciences	209,933.0	212,312.7
Atmospheric sciences	5,144.7	NA
Geological sciences	283.6	NA
Oceanography	36,515.0	NA
Other environmental sciences	167,989.7	NA
Life sciences	9,545,271.6	10,123,344.7
Agricultural sciences	254,024.9	NA
Biological sciences (excluding environmental biology)	4,936,824.6	NA
Environmental biology	102,092.1	NA
Medical sciences	3,225,633.1	NA
Other life sciences	1,026,697.0	NA
Physical sciences	118,031.4	195,839.7
Astronomy	1,063.1	NA
Chemistry	66,439.3	NA
Physics	30,645.8	NA
Other physical sciences	19,883.3	NA
Psychology	759,370.2	802,608.1
Biological aspects	0.0	NA
Social aspects	3,565.7	NA
Other psychological sciences	755,804.5	NA
Social sciences	115,801.9	127,668.1
Anthropology	36.1	NA
Economics	45,838.8	NA
Political science	0.0	NA
Sociology	15,050.5	NA
Other social sciences	54,876.4	NA
Other sciences nec	595,371.3	594,133.9

NA = not available; data were not collected at that level for that fiscal year.

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Applied research obligations of these seven agencies represented more than 95% of total federal applied research obligations to universities and colleges in FYs 2019–20. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 77

Federal obligations for applied research performed at universities and colleges, by selected agency and field of science and engineering: FY 2019

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
All agencies surveyed	13,077,676.4	385,120.2	1,348,776.6	209,933.0	9,545,271.6	118,031.4	759,370.2	115,801.9	595,371.3
Departments									
Department of Agriculture	558,674.3	633.6	31,507.9	6,486.6	450,764.3	10,793.0	0.0	58,488.8	0.0
Agricultural Research Service	50,927.4	66.2	458.3	224.1	46,787.0	3,269.5	0.0	122.2	0.0
Economic Research Service	3,680.9	0.0	0.0	0.0	0.0	0.0	0.0	3,680.9	0.0
Forest Service	15,163.2	314.0	1,145.8	3,320.1	7,826.8	106.0	0.0	2,450.5	0.0
National Agricultural Statistics Service	253.4	253.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Institute of Food and Agriculture	487,536.9	0.0	29,903.8	2,942.4	396,150.5	7,417.5	0.0	51,122.7	0.0
Rural Business-Cooperative Service	1,112.5	0.0	0.0	0.0	0.0	0.0	0.0	1,112.5	0.0
Department of Defense	788,048.4	222,186.8	214,062.5	39,795.1	101,373.1	30,742.2	3,637.2	0.0	176,251.6
Defense Advanced Research Projects Agency	315,029.0	177,188.4	44,185.4	2,677.2	84,216.6	4,134.6	0.0	0.0	2,626.8
Department of the Air Force	109,588.0	8,880.2	84,554.4	1,184.1	3,576.4	11,364.3	28.6	0.0	0.0
Department of the Army	115,522.7	35.9	258.6	0.0	0.0	0.0	0.0	0.0	115,228.2
Department of the Navy	213,029.1	31,803.8	81,829.3	35,933.8	3,828.8	3,234.4	3,606.6	0.0	52,792.4
Other defense agencies	34,879.6	4,278.5	3,234.8	0.0	9,751.4	12,008.8	2.0	0.0	5,604.2
Department of Energy	428,308.8	8,886.3	384,875.0	4,644.5	8,567.2	21,335.8	0.0	0.0	0.0
Advanced Research Projects Agency—Energy	81,578.5	8,886.3	43,489.2	0.0	8,567.2	20,635.8	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	8,580.1	0.0	8,580.1	0.0	0.0	0.0	0.0	0.0	0.0
Energy Efficiency and Renewable Energy	307,763.4	0.0	307,763.4	0.0	0.0	0.0	0.0	0.0	0.0
Environmental Management	4,644.5	0.0	0.0	4,644.5	0.0	0.0	0.0	0.0	0.0

TABLE 77

Federal obligations for applied research performed at universities and colleges, by selected agency and field of science and engineering: FY 2019

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
National Nuclear Security Administration	975.0	0.0	275.0	0.0	0.0	700.0	0.0	0.0	0.0
Defense Programs	975.0	0.0	275.0	0.0	0.0	700.0	0.0	0.0	0.0
Nuclear Energy	21,267.3	0.0	21,267.3	0.0	0.0	0.0	0.0	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	3,500.0	0.0	3,500.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Health and Human Services	10,589,653.7	27,970.9	488,660.7	119,397.8	8,948,189.6	32,434.7	755,733.0	54,847.0	162,420.1
Administration for Community Living	53,478.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53,478.7
Agency for Healthcare Research and Quality	100,708.7	1,827.9	433.0	0.0	77,447.9	0.0	0.0	10,152.3	10,847.7
Centers for Disease Control and Prevention	90,717.2	0.0	0.0	24,669.1	66,048.0	0.0	0.0	0.0	0.0
Centers for Medicare and Medicaid Services	11,554.7	0.0	0.0	0.0	11,554.7	0.0	0.0	0.0	0.0
Food and Drug Administration	72,300.0	0.0	0.0	0.0	72,300.0	0.0	0.0	0.0	0.0
Health Resources and Services Administration	24,027.6	0.0	0.0	0.0	10,953.9	0.0	0.0	2,265.5	10,808.1
National Institutes of Health	10,234,721.2	26,143.0	488,227.7	94,728.6	8,709,885.1	32,434.7	755,733.0	40,283.5	87,285.6
Office of the Secretary of Health and Human Services	2,145.7	0.0	0.0	0.0	0.0	0.0	0.0	2,145.7	0.0
Office of the Assistant Secretary for Planning and Evaluation	2,145.7	0.0	0.0	0.0	0.0	0.0	0.0	2,145.7	0.0
Department of Homeland Security	2,355.7	1,667.7	0.0	0.0	462.0	0.0	0.0	0.0	226.0

TABLE 77

Federal obligations for applied research performed at universities and colleges, by selected agency and field of science and engineering: FY 2019

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Countering Weapons of Mass Destruction Office	226.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	226.0
Cybersecurity and Infrastructure Security Agency	1,173.8	1,173.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Science and Technology Directorate	852.8	390.8	0.0	0.0	462.0	0.0	0.0	0.0	0.0
U.S. Coast Guard	103.2	103.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other agencies									
National Aeronautics and Space Administration	168,879.3	0.0	81,654.2	33,308.5	30,616.7	11,252.9	0.0	0.0	12,047.0
National Science Foundation	541,756.1	123,774.9	148,016.4	6,300.6	5,298.7	11,472.8	0.0	2,466.0	244,426.6

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Applied research obligations of these seven agencies represented more than 95% of total federal applied research obligations to universities and colleges in FY 2019. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 78

Preliminary federal obligations for applied research performed at universities and colleges, by selected agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
All agencies surveyed	14,014,190.8	425,269.5	1,533,014.1	212,312.7	10,123,344.7	195,839.7	802,608.1	127,668.1	594,133.9
Departments									
Department of Agriculture	640,258.5	612.9	40,330.3	6,992.5	512,905.1	10,846.5	0.0	68,571.2	0.0
Agricultural Research Service	38,195.5	49.7	343.8	168.1	35,090.2	2,452.2	0.0	91.7	0.0
Economic Research Service	3,680.0	0.0	0.0	0.0	0.0	0.0	0.0	3,680.0	0.0
Foreign Agricultural Service	500.0	0.0	0.0	0.0	500.0	0.0	0.0	0.0	0.0
Forest Service	15,163.2	314.0	1,145.8	3,320.1	7,826.8	106.0	0.0	2,450.5	0.0
National Agricultural Statistics Service	249.3	249.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Institute of Food and Agriculture	581,321.4	0.0	38,840.8	3,504.4	469,488.0	8,288.3	0.0	61,199.9	0.0
Rural Business-Cooperative Service	1,149.2	0.0	0.0	0.0	0.0	0.0	0.0	1,149.2	0.0
Department of Defense	832,795.7	256,319.6	226,671.6	39,391.2	116,083.7	29,837.4	3,537.2	0.0	160,955.0
Defense Advanced Research Projects Agency	376,847.8	211,958.5	52,856.0	3,202.5	100,742.6	4,946.0	0.0	0.0	3,142.3
Department of the Air Force	117,781.8	9,544.1	90,876.5	1,272.7	3,843.8	12,214.0	30.7	0.0	0.0
Department of the Army	99,749.4	31.0	223.3	0.0	0.0	0.0	0.0	0.0	99,495.1
Department of the Navy	206,995.1	30,902.9	79,511.5	34,915.9	3,720.4	3,142.8	3,504.5	0.0	51,297.0
Other defense agencies	31,421.6	3,883.1	3,204.3	0.0	7,777.0	9,534.6	2.0	0.0	7,020.6
Department of Energy	591,771.8	9,326.2	469,953.1	1,584.0	8,991.3	101,917.2	0.0	0.0	0.0
Advanced Research Projects Agency—Energy	85,616.7	9,326.2	45,641.9	0.0	8,991.3	21,657.2	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	8,050.7	0.0	8,050.7	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 78

Preliminary federal obligations for applied research performed at universities and colleges, by selected agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Energy Efficiency and Renewable Energy	374,640.0	0.0	374,640.0	0.0	0.0	0.0	0.0	0.0	0.0
Environmental Management	1,584.0	0.0	0.0	1,584.0	0.0	0.0	0.0	0.0	0.0
National Nuclear Security Administration	80,360.0	0.0	100.0	0.0	0.0	80,260.0	0.0	0.0	0.0
Defense Programs	80,360.0	0.0	100.0	0.0	0.0	80,260.0	0.0	0.0	0.0
Nuclear Energy	41,520.5	0.0	41,520.5	0.0	0.0	0.0	0.0	0.0	0.0
Department of Health and Human Services	11,179,160.1	29,441.5	516,678.5	125,161.4	9,450,486.5	34,672.7	799,070.9	56,535.3	167,113.4
Administration for Community Living	52,282.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52,282.0
Agency for Healthcare Research and Quality	98,720.2	1,799.3	453.2	0.0	74,970.0	0.0	0.0	10,307.3	11,190.4
Centers for Disease Control and Prevention	96,298.0	0.0	0.0	25,000.5	70,619.4	378.0	0.0	300.0	0.0
Centers for Medicare and Medicaid Services	12,000.0	0.0	0.0	0.0	12,000.0	0.0	0.0	0.0	0.0
Food and Drug Administration	72,585.6	0.0	0.0	0.0	72,585.6	0.0	0.0	0.0	0.0
Health Resources and Services Administration	23,492.6	0.0	0.0	0.0	10,953.9	0.0	0.0	1,188.7	11,350.0
National Institutes of Health	10,821,636.1	27,642.2	516,225.3	100,160.9	9,209,357.5	34,294.7	799,070.9	42,593.6	92,291.0
Office of the Secretary of Health and Human Services	2,145.7	0.0	0.0	0.0	0.0	0.0	0.0	2,145.7	0.0
Office of the Assistant Secretary for Planning and Evaluation	2,145.7	0.0	0.0	0.0	0.0	0.0	0.0	2,145.7	0.0
Department of Homeland Security	2,000.0	1,000.0	0.0	0.0	1,000.0	0.0	0.0	0.0	0.0

TABLE 78

Preliminary federal obligations for applied research performed at universities and colleges, by selected agency and field of science and engineering: FY 2020

(Dollars in thousands)

Agency	Total	Computer sciences and mathematics	Engineering	Environmental sciences	Life sciences	Physical sciences	Psychology	Social sciences	Other sciences nec
Science and Technology Directorate	2,000.0	1,000.0	0.0	0.0	1,000.0	0.0	0.0	0.0	0.0
Other agencies									
National Aeronautics and Space Administration	205,463.9	0.0	125,630.9	32,639.0	28,374.2	6,648.7	0.0	0.0	12,171.1
National Science Foundation	562,740.8	128,569.3	153,749.7	6,544.6	5,503.9	11,917.2	0.0	2,561.6	253,894.5

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Applied research obligations of these seven agencies represented more than 95% of total federal applied research obligations to universities and colleges in FY 2020. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 79

Federal obligations for applied research performed at universities and colleges in computer sciences and mathematics, by selected agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Computer sciences	Mathematics	Other computer sciences and mathematics
All agencies surveyed	385,120.2	341,579.0	28,648.7	14,892.5
Departments				
Department of Agriculture	633.6	290.2	343.4	0.0
Agricultural Research Service	66.2	66.2	0.0	0.0
Forest Service	314.0	224.0	90.0	0.0
National Agricultural Statistics Service	253.4	0.0	253.4	0.0
Department of Defense	222,186.8	205,526.2	1,871.2	14,789.4
Defense Advanced Research Projects Agency	177,188.4	165,568.0	0.0	11,620.4
Department of the Air Force	8,880.2	5,989.5	235.0	2,655.7
Department of the Army	35.9	35.9	0.0	0.0
Department of the Navy	31,803.8	30,040.9	1,636.2	126.6
Other defense agencies	4,278.5	3,891.8	0.0	386.7
Department of Energy	8,886.3	8,886.3	0.0	0.0
Advanced Research Projects Agency—Energy	8,886.3	8,886.3	0.0	0.0
Department of Health and Human Services	27,970.9	1,827.9	26,143.0	0.0
Agency for Healthcare Research and Quality	1,827.9	1,827.9	0.0	0.0
National Institutes of Health	26,143.0	0.0	26,143.0	0.0
Department of Homeland Security	1,667.7	1,564.6	0.0	103.2
Cybersecurity and Infrastructure Security Agency	1,173.8	1,173.8	0.0	0.0
Science and Technology Directorate	390.8	390.8	0.0	0.0
U.S. Coast Guard	103.2	0.0	0.0	103.2
Other agencies				
National Science Foundation	123,774.9	123,483.8	291.1	0.0

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Applied research obligations of these seven agencies represented more than 95% of total federal applied research obligations to universities and colleges in FY 2019. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 80

Federal obligations for applied research performed at universities and colleges in engineering, by selected agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Aeronautical engineering	Astronautical engineering	Chemical engineering	Civil engineering	Electrical engineering	Mechanical engineering	Metallurgy and materials engineering	Other engineering
Office of Cybersecurity, Energy Security, and Emergency Response	3,500.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3,500.0
Department of Health and Human Services	488,660.7	0.0	0.0	0.0	0.0	0.0	0.0	6,312.2	482,348.5
Agency for Healthcare Research and Quality	433.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	433.0
National Institutes of Health	488,227.7	0.0	0.0	0.0	0.0	0.0	0.0	6,312.2	481,915.5
Other agencies									
National Aeronautics and Space Administration	81,654.2	38,178.7	6,392.0	0.0	0.0	0.0	0.0	34.9	37,048.6
National Science Foundation	148,016.4	0.0	0.0	12,646.9	977.6	20,816.9	12,353.7	2,345.5	98,875.9

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Applied research obligations of these seven agencies represented more than 95% of total federal applied research obligations to universities and colleges in FY 2019. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 81

Federal obligations for applied research performed at universities and colleges in environmental sciences, by selected agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Atmospheric sciences	Geological sciences	Oceanography	Other environmental sciences
All agencies surveyed	209,933.0	5,144.7	283.6	36,515.0	167,989.7
Departments					
Department of Agriculture	6,486.6	3,832.5	5.1	0.0	2,649.0
Agricultural Research Service	224.1	219.0	5.1	0.0	0.0
Forest Service	3,320.1	671.1	0.0	0.0	2,649.0
National Institute of Food and Agriculture	2,942.4	2,942.4	0.0	0.0	0.0
Department of Defense	39,795.1	1,168.7	0.7	36,487.8	2,137.9
Defense Advanced Research Projects Agency	2,677.2	0.0	0.0	2,677.2	0.0
Department of the Air Force	1,184.1	1,168.7	0.7	0.0	14.7
Department of the Navy	35,933.8	0.0	0.0	33,810.6	2,123.2
Department of Energy	4,644.5	0.0	0.0	0.0	4,644.5
Environmental Management	4,644.5	0.0	0.0	0.0	4,644.5
Department of Health and Human Services	119,397.8	0.0	0.0	0.0	119,397.8
Centers for Disease Control and Prevention	24,669.1	0.0	0.0	0.0	24,669.1
National Institutes of Health	94,728.6	0.0	0.0	0.0	94,728.6
Other agencies					
National Aeronautics and Space Administration	33,308.5	0.0	0.0	0.0	33,308.5
National Science Foundation	6,300.6	143.5	277.9	27.2	5,852.0

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Applied research obligations of these seven agencies represented more than 95% of total federal applied research obligations to universities and colleges in FY 2019. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 82

Federal obligations for applied research performed at universities and colleges in life sciences, by selected agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Agricultural sciences	Biological sciences (excluding environmental biology)	Environmental biology	Medical sciences	Other life sciences
All agencies surveyed	9,545,271.6	254,024.9	4,936,824.6	102,092.1	3,225,633.1	1,026,697.0
Departments						
Department of Agriculture	450,764.3	245,457.7	109,728.7	91,314.9	4,075.6	187.5
Agricultural Research Service	46,787.0	36,346.9	3,259.4	6,350.6	830.1	0.0
Forest Service	7,826.8	281.0	3,267.9	4,090.4	0.0	187.5
National Institute of Food and Agriculture	396,150.5	208,829.8	103,201.4	80,873.8	3,245.5	0.0
Department of Defense	101,373.1	0.0	34,682.2	10,729.8	51,556.3	4,404.9
Defense Advanced Research Projects Agency	84,216.6	0.0	23,676.9	10,729.8	49,810.0	0.0
Department of the Air Force	3,576.4	0.0	356.9	0.0	2.1	3,217.4
Department of the Navy	3,828.8	0.0	1,439.1	0.0	1,223.3	1,166.4
Other defense agencies	9,751.4	0.0	9,209.4	0.0	521.0	21.0
Department of Energy	8,567.2	8,567.2	0.0	0.0	0.0	0.0
Advanced Research Projects Agency—Energy	8,567.2	8,567.2	0.0	0.0	0.0	0.0
Department of Health and Human Services	8,948,189.6	0.0	4,786,700.5	0.0	3,170,001.1	991,487.9
Agency for Healthcare Research and Quality	77,447.9	0.0	0.0	0.0	76,256.0	1,191.9
Centers for Disease Control and Prevention	66,048.0	0.0	378.1	0.0	10,598.5	55,071.4
Centers for Medicare and Medicaid Services	11,554.7	0.0	0.0	0.0	11,554.7	0.0
Food and Drug Administration	72,300.0	0.0	72,300.0	0.0	0.0	0.0
Health Resources and Services Administration	10,953.9	0.0	0.0	0.0	10,953.9	0.0
National Institutes of Health	8,709,885.1	0.0	4,714,022.5	0.0	3,060,638.0	935,224.6
Department of Homeland Security	462.0	0.0	462.0	0.0	0.0	0.0
Science and Technology Directorate	462.0	0.0	462.0	0.0	0.0	0.0
Other agencies						
National Aeronautics and Space Administration	30,616.7	0.0	0.0	0.0	0.0	30,616.7
National Science Foundation	5,298.7	0.0	5,251.3	47.4	0.0	0.0

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Applied research obligations of these seven agencies represented more than 95% of total federal applied research obligations to universities and colleges in FY 2019. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 83

Federal obligations for applied research performed at universities and colleges in physical sciences, by selected agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Astronomy	Chemistry	Physics	Other physical sciences
All agencies surveyed	118,031.4	1,063.1	66,439.3	30,645.8	19,883.3
Departments					
Department of Agriculture	10,793.0	0.0	10,670.8	122.2	0.0
Agricultural Research Service	3,269.5	0.0	3,147.3	122.2	0.0
Forest Service	106.0	0.0	106.0	0.0	0.0
National Institute of Food and Agriculture	7,417.5	0.0	7,417.5	0.0	0.0
Department of Defense	30,742.2	579.1	11,651.2	12,825.2	5,686.7
Defense Advanced Research Projects Agency	4,134.6	0.0	2,009.9	2,124.7	0.0
Department of the Air Force	11,364.3	14.1	431.9	7,077.1	3,841.2
Department of the Navy	3,234.4	565.0	0.0	824.0	1,845.5
Other defense agencies	12,008.8	0.0	9,209.4	2,799.4	0.0
Department of Energy	21,335.8	0.0	10,728.5	10,607.2	0.0
Advanced Research Projects Agency—Energy	20,635.8	0.0	10,728.5	9,907.2	0.0
National Nuclear Security Administration	700.0	0.0	0.0	700.0	0.0
Defense Programs	700.0	0.0	0.0	700.0	0.0
Department of Health and Human Services	32,434.7	0.0	31,942.3	0.0	492.4
National Institutes of Health	32,434.7	0.0	31,942.3	0.0	492.4
Other agencies					
National Aeronautics and Space Administration	11,252.9	0.0	0.0	1,714.4	9,538.6
National Science Foundation	11,472.8	484.0	1,446.4	5,376.7	4,165.7

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Applied research obligations of these seven agencies represented more than 95% of total federal applied research obligations to universities and colleges in FY 2019. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 84

Federal obligations for applied research performed at universities and colleges in psychology, by selected agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Biological aspects	Social aspects	Other psychological sciences
All agencies surveyed	759,370.2	0.0	3,565.7	755,804.5
Departments				
Department of Defense	3,637.2	0.0	3,565.7	71.5
Department of the Air Force	28.6	0.0	0.0	28.6
Department of the Navy	3,606.6	0.0	3,565.7	40.9
Other defense agencies	2.0	0.0	0.0	2.0
Department of Health and Human Services	755,733.0	0.0	0.0	755,733.0
National Institutes of Health	755,733.0	0.0	0.0	755,733.0

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Applied research obligations of these seven agencies represented more than 95% of total federal applied research obligations to universities and colleges in FY 2019. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 85

Federal obligations for applied research performed at universities and colleges in social sciences, by selected agency and detailed field: FY 2019

(Dollars in thousands)

Agency	Total	Anthropology	Economics	Political science	Sociology	Other social sciences
All agencies surveyed	115,801.9	36.1	45,838.8	0.0	15,050.5	54,876.4
Departments						
Department of Agriculture	58,488.8	0.0	42,409.8	0.0	15,050.5	1,028.5
Agricultural Research Service	122.2	0.0	122.2	0.0	0.0	0.0
Economic Research Service	3,680.9	0.0	3,680.9	0.0	0.0	0.0
Forest Service	2,450.5	0.0	1,080.4	0.0	341.6	1,028.5
National Institute of Food and Agriculture	51,122.7	0.0	36,413.7	0.0	14,709.0	0.0
Rural Business-Cooperative Service	1,112.5	0.0	1,112.5	0.0	0.0	0.0
Department of Health and Human Services	54,847.0	36.1	3,429.1	0.0	0.0	51,381.8
Agency for Healthcare Research and Quality	10,152.3	36.1	3,429.1	0.0	0.0	6,687.1
Health Resources and Services Administration	2,265.5	0.0	0.0	0.0	0.0	2,265.5
National Institutes of Health	40,283.5	0.0	0.0	0.0	0.0	40,283.5
Office of the Secretary of Health and Human Services	2,145.7	0.0	0.0	0.0	0.0	2,145.7
Office of the Assistant Secretary for Planning and Evaluation	2,145.7	0.0	0.0	0.0	0.0	2,145.7
Other agencies						
National Science Foundation	2,466.0	0.0	0.0	0.0	0.0	2,466.0

Note(s):

Because of rounding, detail may not add to total. Seven agencies are required to report data for this section of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; the National Aeronautics and Space Administration; and the National Science Foundation. Applied research obligations of these seven agencies represented more than 95% of total federal applied research obligations to universities and colleges in FY 2019. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 86

Federal obligations for research and experimental development to foreign performers, by region, country, or economy, and agency: FY 2019

(Dollars in thousands)

Region, country, or economy	Total	DHS	DOD	DOE	HHS	NASA	NSF	USDA	Other ^a
All areas and organizations	937,206.1	9,962.2	543,731.2	1,881.0	264,991.6	33,280.2	25,051.8	3,082.9	55,225.1
Africa	86,774.6	0.0	599.0	0.0	85,069.7	0.8	0.0	105.1	1,000.0
Botswana	1,106.7	0.0	0.0	0.0	1,106.7	0.0	0.0	0.0	0.0
Congo, Democratic Republic of the	135.0	0.0	0.0	0.0	135.0	0.0	0.0	0.0	0.0
Côte d'Ivoire	33.5	0.0	0.0	0.0	0.0	0.0	0.0	33.5	0.0
Egypt	1,000.0	0.0	0.0	0.0	*	0.0	0.0	0.0	1,000.0
Eritrea	225.0	0.0	0.0	0.0	225.0	0.0	0.0	0.0	0.0
Ethiopia	1,381.2	0.0	0.0	0.0	1,381.2	0.0	0.0	0.0	0.0
Gambia, The	103.4	0.0	0.0	0.0	103.4	0.0	0.0	0.0	0.0
Ghana	3,987.8	0.0	0.0	0.0	3,987.8	0.0	0.0	0.0	0.0
Kenya	4,522.3	0.0	233.8	0.0	4,234.5	0.0	0.0	54.0	0.0
Madagascar	134.7	0.0	0.0	0.0	134.7	0.0	0.0	0.0	0.0
Malawi	846.5	0.0	0.0	0.0	846.5	0.0	0.0	0.0	0.0
Mali	2,438.4	0.0	0.0	0.0	2,438.4	0.0	0.0	0.0	0.0
Mozambique	1,421.9	0.0	0.0	0.0	1,421.9	0.0	0.0	0.0	0.0
Namibia	31.0	0.0	0.0	0.0	30.2	0.8	0.0	0.0	0.0
Nigeria	6,680.5	0.0	0.0	0.0	6,680.5	0.0	0.0	0.0	0.0
Rwanda	715.9	0.0	0.0	0.0	715.9	0.0	0.0	0.0	0.0
Senegal	537.1	0.0	0.0	0.0	537.1	0.0	0.0	0.0	0.0
South Africa	46,860.6	0.0	365.2	0.0	46,477.9	0.0	0.0	17.6	0.0
Tanzania	1,928.1	0.0	0.0	0.0	1,928.1	0.0	0.0	0.0	0.0
Uganda	9,762.2	0.0	0.0	0.0	9,762.2	0.0	0.0	0.0	0.0
Zambia	1,443.9	0.0	0.0	0.0	1,443.9	0.0	0.0	0.0	0.0
Zimbabwe	1,478.8	0.0	0.0	0.0	1,478.8	0.0	0.0	0.0	0.0
Asia	300,512.8	2,125.7	271,568.1	268.5	25,648.1	295.3	0.0	602.6	4.6
Bangladesh	4,529.1	0.0	0.0	0.0	4,529.1	0.0	0.0	0.0	0.0
Bhutan	38.7	0.0	38.7	0.0	0.0	0.0	0.0	0.0	0.0
China	1,912.5	0.0	6.9	0.0	1,816.5	0.0	0.0	89.1	0.0
Cyprus	212.0	0.0	212.0	0.0	0.0	0.0	0.0	0.0	0.0
Georgia	239.3	0.0	7.2	0.0	232.1	0.0	0.0	0.0	0.0
Hong Kong	2,504.9	0.0	0.3	0.0	2,500.0	0.0	0.0	0.0	4.6
India	4,291.7	0.0	1,221.8	0.0	3,070.0	0.0	0.0	0.0	0.0
Indonesia	300.0	0.0	0.0	0.0	300.0	0.0	0.0	0.0	0.0
Israel	259,232.9	2,125.7	255,193.0	268.5	964.5	200.3	0.0	480.8	0.0
Japan	4,028.4	0.0	3,673.4	0.0	289.3	65.6	0.0	0.0	0.0
Korea, South	1,999.3	0.0	1,922.3	0.0	54.0	0.0	0.0	23.0	0.0
Lebanon	153.1	0.0	0.0	0.0	153.1	0.0	0.0	0.0	0.0
Malaysia	324.7	0.0	189.4	0.0	135.3	0.0	0.0	0.0	0.0
Mongolia	32.0	0.0	32.0	0.0	0.0	0.0	0.0	0.0	0.0
Nepal	196.2	0.0	0.0	0.0	196.2	0.0	0.0	0.0	0.0
Pakistan	147.4	0.0	0.0	0.0	147.4	0.0	0.0	0.0	0.0
Philippines	1,113.7	0.0	1,113.7	0.0	0.0	0.0	0.0	0.0	0.0
Saudi Arabia	123.1	0.0	113.5	0.0	0.0	0.0	0.0	9.7	0.0
Singapore	1,802.0	0.0	1,772.7	0.0	0.0	29.3	0.0	0.0	0.0
Sri Lanka	394.7	0.0	0.0	0.0	394.7	0.0	0.0	0.0	0.0
Taiwan	777.9	0.0	777.9	0.0	0.0	0.0	0.0	0.0	0.0
Thailand	12,661.6	0.0	2,972.1	0.0	9,689.5	0.0	0.0	0.0	0.0
Turkey	228.0	0.0	228.0	0.0	0.0	0.0	0.0	0.0	0.0
Uzbekistan	49.0	0.0	0.0	0.0	49.0	0.0	0.0	0.0	0.0

TABLE 86

Federal obligations for research and experimental development to foreign performers, by region, country, or economy, and agency: FY 2019

(Dollars in thousands)

Region, country, or economy	Total	DHS	DOD	DOE	HHS	NASA	NSF	USDA	Other ^a
Vietnam	1,368.5	0.0	256.1	0.0	1,112.3	0.0	0.0	0.0	0.0
Asian countries, other	1,852.2	0.0	1,837.2	0.0	15.0	0.0	0.0	0.0	0.0
Europe	307,258.3	3,547.4	183,598.7	1,193.0	67,574.6	29,634.2	15,188.9	763.1	5,758.3
Austria	5,530.6	0.0	1,798.1	0.0	0.0	1,219.5	2,512.9	0.0	0.0
Belgium	3,325.3	0.0	535.8	0.0	283.8	2,505.7	0.0	0.0	0.0
Croatia	320.1	0.0	320.1	0.0	0.0	0.0	0.0	0.0	0.0
Czechia	2,954.5	0.0	2,953.2	0.0	0.0	1.3	0.0	0.0	0.0
Denmark	2,869.3	0.0	1,228.5	0.0	642.1	992.7	0.0	0.0	6.0
Estonia	527.1	0.0	527.1	0.0	0.0	0.0	0.0	0.0	0.0
Finland	1,554.0	0.0	681.3	0.0	861.4	11.3	0.0	0.0	0.0
France	23,044.9	0.0	13,488.3	10.0	7,782.6	97.2	1,487.9	130.9	48.0
Germany	32,502.6	0.0	5,845.0	0.0	17,285.4	1,350.4	7,900.0	121.9	0.0
Greece	447.0	0.0	429.0	0.0	0.0	0.0	0.0	18.0	0.0
Hungary	180.8	0.0	180.8	0.0	0.0	0.0	0.0	0.0	0.0
Ireland	872.7	0.0	383.9	0.0	401.6	66.0	0.0	0.0	21.2
Italy	5,681.6	0.0	3,932.7	0.0	1,304.9	0.1	0.0	185.0	258.9
Latvia	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Luxembourg	326.2	0.0	326.2	0.0	0.0	0.0	0.0	0.0	0.0
Netherlands	18,241.5	0.0	3,680.9	0.0	4,850.2	9,360.4	100.0	0.0	250.0
Norway	100,623.2	0.0	95,418.7	0.0	0.0	3,281.2	0.0	0.0	1,923.2
Poland	360.3	0.0	359.8	0.0	0.0	0.0	0.0	0.5	0.0
Romania	60.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0
Russia	5,263.6	0.0	0.0	0.0	0.0	5,263.6	0.0	0.0	0.0
Serbia	66.1	0.0	66.1	0.0	0.0	0.0	0.0	0.0	0.0
Slovenia	265.9	0.0	265.9	0.0	0.0	0.0	0.0	0.0	0.0
Spain	6,821.1	0.0	2,460.4	0.0	135.0	3,955.2	0.0	121.0	149.6
Sweden	7,789.4	0.0	2,659.1	150.8	2,017.3	24.2	2,938.0	0.0	0.0
Switzerland	15,357.7	0.0	2,891.5	484.0	11,508.7	453.5	0.0	20.0	0.0
Ukraine	607.9	0.0	153.7	0.0	454.2	0.0	0.0	0.0	0.0
United Kingdom	71,116.4	3,547.4	42,952.1	0.0	20,047.4	1,052.0	250.1	165.9	3,101.4
European countries, other	548.2	0.0	0.0	548.2	0.0	0.0	0.0	0.0	0.0
North America	123,814.4	4,289.1	54,764.3	419.5	51,718.2	2,293.3	9,055.9	401.4	872.7
Bahamas, The	11,872.9	0.0	11,872.9	0.0	0.0	0.0	0.0	0.0	0.0
Bermuda	6,949.9	0.0	0.0	0.0	0.0	0.0	6,949.9	0.0	0.0
Canada	89,494.9	4,289.1	38,822.1	419.5	40,827.1	2,188.5	1,906.0	169.9	872.7
Costa Rica	7,828.6	0.0	0.0	0.0	7,715.8	14.4	0.0	98.3	0.0
Greenland	90.4	0.0	0.0	0.0	0.0	90.4	0.0	0.0	0.0
Guatemala	1,158.2	0.0	0.0	0.0	1,158.2	0.0	0.0	0.0	0.0
Haiti	1,883.4	0.0	0.0	0.0	1,883.4	0.0	0.0	0.0	0.0
Mexico	4,317.9	0.0	4,059.7	0.0	0.0	0.0	200.0	58.1	0.0
Nicaragua	133.7	0.0	0.0	0.0	133.7	0.0	0.0	0.0	0.0
Panama	75.1	0.0	0.0	0.0	0.0	0.0	0.0	75.1	0.0
Virgin Islands, British	9.5	0.0	9.5	0.0	0.0	0.0	0.0	0.0	0.0
Oceania	49,311.8	0.0	29,133.1	0.0	18,791.0	870.2	0.0	517.5	0.0
Australia	44,021.6	0.0	27,944.3	0.0	15,049.1	510.8	0.0	517.5	0.0
Fiji	43.5	0.0	43.5	0.0	0.0	0.0	0.0	0.0	0.0
Marshall Islands	227.9	0.0	227.9	0.0	0.0	0.0	0.0	0.0	0.0
New Zealand	5,018.8	0.0	917.5	0.0	3,741.9	359.4	0.0	0.0	0.0
South America	21,220.0	0.0	3,247.7	0.0	16,190.1	186.5	806.9	693.2	95.7

TABLE 86

Federal obligations for research and experimental development to foreign performers, by region, country, or economy, and agency: FY 2019

(Dollars in thousands)

Region, country, or economy	Total	DHS	DOD	DOE	HHS	NASA	NSF	USDA	Other ^a
Argentina	2,975.0	0.0	116.8	0.0	2,237.1	0.0	0.0	621.2	0.0
Brazil	5,798.4	0.0	1,172.3	0.0	4,513.2	82.9	0.0	30.0	0.0
Chile	2,741.3	0.0	1,795.0	0.0	770.1	80.6	0.0	0.0	95.7
Colombia	977.0	0.0	42.0	0.0	935.0	0.0	0.0	0.0	0.0
Paraguay	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Peru	7,602.8	0.0	121.6	0.0	7,418.1	23.1	0.0	40.0	0.0
Suriname	316.6	0.0	0.0	0.0	316.6	0.0	0.0	0.0	0.0
Uruguay	806.9	0.0	0.0	0.0	0.0	0.0	806.9	0.0	0.0
International organizations	48,314.2	0.0	820.4	0.0	0.0	0.0	0.0	0.0	47,493.8

* = amount greater than \$0 but less than \$50.

DHS = Department of Homeland Security; DOD = Department of Defense; DOE = Department of Energy; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NSF = National Science Foundation; USDA = Department of Agriculture.

^a Includes data for the Departments of Commerce, the Interior, and Transportation; the Agency for International Development; the Nuclear Regulatory Commission; and the Social Security Administration.

Note(s):

Because of rounding, detail may not add to total. Only those countries that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 87

Federal obligations for basic research to foreign performers, by region, country, or economy, and agency: FY 2019

(Dollars in thousands)

Region, country, or economy	Total	DOC	DOD	DOE	HHS	NASA	NSF	USDA
All areas and organizations	249,523.2	302.6	83,802.9	1,236.2	123,026.4	14,974.7	24,688.8	1,491.7
Africa	41,717.6	0.0	87.5	0.0	41,576.8	0.8	0.0	52.5
Botswana	570.0	0.0	0.0	0.0	570.0	0.0	0.0	0.0
Congo, Democratic Republic of the	69.5	0.0	0.0	0.0	69.5	0.0	0.0	0.0
Côte d'Ivoire	16.8	0.0	0.0	0.0	0.0	0.0	0.0	16.8
Eritrea	115.9	0.0	0.0	0.0	115.9	0.0	0.0	0.0
Ethiopia	711.3	0.0	0.0	0.0	711.3	0.0	0.0	0.0
Gambia, The	53.3	0.0	0.0	0.0	53.3	0.0	0.0	0.0
Ghana	2,053.7	0.0	0.0	0.0	2,053.7	0.0	0.0	0.0
Kenya	1,821.0	0.0	76.0	0.0	1,718.0	0.0	0.0	27.0
Madagascar	69.3	0.0	0.0	0.0	69.3	0.0	0.0	0.0
Malawi	384.4	0.0	0.0	0.0	384.4	0.0	0.0	0.0
Mali	1,255.8	0.0	0.0	0.0	1,255.8	0.0	0.0	0.0
Mozambique	732.3	0.0	0.0	0.0	732.3	0.0	0.0	0.0
Namibia	16.4	0.0	0.0	0.0	15.6	0.8	0.0	0.0
Nigeria	3,377.2	0.0	0.0	0.0	3,377.2	0.0	0.0	0.0
Rwanda	368.7	0.0	0.0	0.0	368.7	0.0	0.0	0.0
South Africa	23,073.8	0.0	11.5	0.0	23,053.5	0.0	0.0	8.8
Tanzania	993.0	0.0	0.0	0.0	993.0	0.0	0.0	0.0
Uganda	4,530.0	0.0	0.0	0.0	4,530.0	0.0	0.0	0.0
Zambia	743.6	0.0	0.0	0.0	743.6	0.0	0.0	0.0
Zimbabwe	761.6	0.0	0.0	0.0	761.6	0.0	0.0	0.0
Asia	19,351.0	4.6	12,357.8	268.5	6,189.1	229.6	0.0	301.3
Bangladesh	1,210.1	0.0	0.0	0.0	1,210.1	0.0	0.0	0.0
China	529.7	0.0	0.0	0.0	485.2	0.0	0.0	44.6
Cyprus	212.0	0.0	212.0	0.0	0.0	0.0	0.0	0.0
Georgia	98.9	0.0	0.0	0.0	98.9	0.0	0.0	0.0
Hong Kong	4.6	4.6	0.0	0.0	0.0	0.0	0.0	0.0
India	1,785.1	0.0	847.9	0.0	937.3	0.0	0.0	0.0
Israel	3,296.3	0.0	2,090.3	268.5	496.7	200.3	0.0	240.4
Japan	3,253.2	0.0	3,104.2	0.0	149.0	*	0.0	0.0
Korea, South	1,045.2	0.0	1,005.9	0.0	27.8	0.0	0.0	11.5
Lebanon	78.9	0.0	0.0	0.0	78.9	0.0	0.0	0.0
Malaysia	249.1	0.0	179.4	0.0	69.7	0.0	0.0	0.0
Nepal	101.1	0.0	0.0	0.0	101.1	0.0	0.0	0.0
Pakistan	75.9	0.0	0.0	0.0	75.9	0.0	0.0	0.0
Philippines	329.1	0.0	329.1	0.0	0.0	0.0	0.0	0.0
Saudi Arabia	103.3	0.0	98.5	0.0	0.0	0.0	0.0	4.8
Singapore	938.2	0.0	908.9	0.0	0.0	29.3	0.0	0.0
Sri Lanka	203.3	0.0	0.0	0.0	203.3	0.0	0.0	0.0
Taiwan	723.8	0.0	723.8	0.0	0.0	0.0	0.0	0.0
Thailand	2,711.1	0.0	768.9	0.0	1,942.2	0.0	0.0	0.0
Turkey	228.0	0.0	228.0	0.0	0.0	0.0	0.0	0.0
Vietnam	520.2	0.0	207.1	0.0	313.1	0.0	0.0	0.0
Asian countries, other	1,653.9	0.0	1,653.9	0.0	0.0	0.0	0.0	0.0
Europe	105,662.3	298.0	43,852.7	548.2	32,061.6	13,359.0	15,188.9	353.9
Austria	5,530.5	0.0	1,798.1	0.0	0.0	1,219.5	2,512.9	0.0
Belgium	3,186.5	0.0	534.9	0.0	146.2	2,505.5	0.0	0.0
Croatia	76.3	0.0	76.3	0.0	0.0	0.0	0.0	0.0
Czechia	393.7	0.0	392.4	0.0	0.0	1.3	0.0	0.0

TABLE 87

Federal obligations for basic research to foreign performers, by region, country, or economy, and agency: FY 2019

(Dollars in thousands)

Region, country, or economy	Total	DOC	DOD	DOE	HHS	NASA	NSF	USDA
Denmark	1,990.8	0.0	667.4	0.0	330.7	992.7	0.0	0.0
Estonia	145.6	0.0	145.6	0.0	0.0	0.0	0.0	0.0
Finland	564.5	0.0	120.9	0.0	443.6	0.0	0.0	0.0
France	14,689.7	48.0	9,075.6	0.0	4,008.0	5.0	1,487.9	65.2
Germany	20,719.0	0.0	3,048.6	0.0	8,902.0	807.7	7,900.0	60.8
Greece	413.3	0.0	413.3	0.0	0.0	0.0	0.0	0.0
Hungary	180.8	0.0	180.8	0.0	0.0	0.0	0.0	0.0
Ireland	656.7	0.0	383.9	0.0	206.8	66.0	0.0	0.0
Italy	2,552.2	0.0	1,880.4	0.0	579.3	0.0	0.0	92.5
Luxembourg	326.2	0.0	326.2	0.0	0.0	0.0	0.0	0.0
Netherlands	4,474.7	250.0	1,349.9	0.0	2,497.9	277.0	100.0	0.0
Norway	3,565.6	0.0	291.9	0.0	0.0	3,273.7	0.0	0.0
Poland	354.3	0.0	354.3	0.0	0.0	0.0	0.0	0.0
Romania	60.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0
Serbia	66.1	0.0	66.1	0.0	0.0	0.0	0.0	0.0
Slovenia	265.9	0.0	265.9	0.0	0.0	0.0	0.0	0.0
Spain	5,232.8	0.0	1,147.6	0.0	69.5	3,955.2	0.0	60.5
Sweden	4,504.2	0.0	527.2	0.0	1,038.9	*	2,938.0	0.0
Switzerland	5,752.8	0.0	1,984.6	0.0	3,681.7	76.5	0.0	10.0
Ukraine	387.6	0.0	153.7	0.0	233.9	0.0	0.0	0.0
United Kingdom	29,024.3	0.0	18,607.1	0.0	9,923.0	179.1	250.1	65.0
European countries, other	548.2	0.0	0.0	548.2	0.0	0.0	0.0	0.0
North America	48,928.6	0.0	13,266.0	419.5	25,678.6	329.8	9,055.9	178.8
Bahamas, The	19.6	0.0	19.6	0.0	0.0	0.0	0.0	0.0
Bermuda	6,949.9	0.0	0.0	0.0	0.0	0.0	6,949.9	0.0
Canada	32,859.8	0.0	9,197.2	419.5	21,049.2	225.0	1,906.0	63.1
Costa Rica	3,495.5	0.0	0.0	0.0	3,432.0	14.4	0.0	49.2
Greenland	90.4	0.0	0.0	0.0	0.0	90.4	0.0	0.0
Guatemala	158.7	0.0	0.0	0.0	158.7	0.0	0.0	0.0
Haiti	970.0	0.0	0.0	0.0	970.0	0.0	0.0	0.0
Mexico	4,268.8	0.0	4,039.7	0.0	0.0	0.0	200.0	29.1
Nicaragua	68.8	0.0	0.0	0.0	68.8	0.0	0.0	0.0
Panama	37.6	0.0	0.0	0.0	0.0	0.0	0.0	37.6
Virgin Islands, British	9.5	0.0	9.5	0.0	0.0	0.0	0.0	0.0
Oceania	20,975.9	0.0	10,664.7	0.0	9,182.4	870.2	0.0	258.5
Australia	17,843.5	0.0	9,818.8	0.0	7,255.4	510.8	0.0	258.5
Fiji	43.5	0.0	43.5	0.0	0.0	0.0	0.0	0.0
New Zealand	3,088.8	0.0	802.3	0.0	1,927.1	359.4	0.0	0.0
South America	12,067.5	0.0	2,753.8	0.0	8,337.9	185.3	443.9	346.6
Argentina	1,579.5	0.0	116.8	0.0	1,152.1	0.0	0.0	310.6
Brazil	3,390.0	0.0	969.0	0.0	2,324.3	81.7	0.0	15.0
Chile	1,981.5	0.0	1,504.4	0.0	396.6	80.6	0.0	0.0
Colombia	523.5	0.0	42.0	0.0	481.5	0.0	0.0	0.0
Paraguay	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Peru	3,985.0	0.0	121.6	0.0	3,820.3	23.1	0.0	20.0
Suriname	163.1	0.0	0.0	0.0	163.1	0.0	0.0	0.0
Uruguay	443.9	0.0	0.0	0.0	0.0	0.0	443.9	0.0
International organizations	820.4	0.0	820.4	0.0	0.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50.

DOC = Department of Commerce; DOD = Department of Defense; DOE = Department of Energy; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NSF = National Science Foundation; USDA = Department of Agriculture.

Note(s):

Because of rounding, detail may not add to total. Only those countries that had obligations in variables represented by this table appear in the table. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 88

Federal obligations for research and experimental development and for R&D plant for selected agencies, by state or location: FY 2019

(Dollars in thousands)

State or location	Total	R&D	R&D plant
All locations	142,499,708.8	138,170,254.9	4,329,453.9
Alabama	5,539,805.1	5,414,464.9	125,340.2
Alaska	340,888.7	334,240.4	6,648.3
Arizona	2,013,773.0	2,001,235.9	12,537.1
Arkansas	179,019.8	179,019.8	0.0
California	19,835,122.2	19,158,610.5	676,511.6
Colorado	5,632,971.8	5,267,919.7	365,052.1
Connecticut	2,674,716.6	2,673,235.2	1,481.4
Delaware	172,646.5	163,086.6	9,559.9
District of Columbia	6,378,676.5	6,228,175.8	150,500.7
Florida	3,925,780.9	3,892,005.0	33,775.9
Georgia	1,510,510.6	1,503,918.0	6,592.6
Hawaii	436,229.5	411,940.0	24,289.5
Idaho	923,310.3	919,915.3	3,395.0
Illinois	3,469,680.5	2,998,344.6	471,335.8
Indiana	902,947.2	894,094.8	8,852.3
Iowa	519,861.0	517,779.2	2,081.8
Kansas	294,816.8	282,617.3	12,199.5
Kentucky	320,174.1	313,350.7	6,823.4
Louisiana	457,919.7	432,060.3	25,859.4
Maine	189,363.5	189,013.5	350.0
Maryland	17,640,752.4	16,992,340.3	648,412.2
Massachusetts	6,877,570.7	6,837,816.2	39,754.5
Michigan	2,138,319.1	2,053,699.5	84,619.7
Minnesota	1,032,347.9	1,029,355.9	2,992.0
Mississippi	518,664.1	505,111.8	13,552.4
Missouri	2,386,259.0	2,375,132.7	11,126.3
Montana	191,413.0	191,393.8	19.1
Nebraska	244,549.9	243,708.3	841.6
Nevada	376,060.9	375,083.5	977.4
New Hampshire	670,578.9	669,304.6	1,274.3
New Jersey	2,915,268.6	2,834,421.1	80,847.5
New Mexico	4,012,491.0	3,755,707.3	256,783.6
New York	6,291,990.4	6,162,335.7	129,654.7
North Carolina	2,440,375.1	2,417,439.8	22,935.4
North Dakota	73,249.5	73,020.1	229.4
Ohio	5,282,785.0	5,188,238.0	94,547.0
Oklahoma	516,671.9	505,865.6	10,806.3
Oregon	841,299.5	696,901.8	144,397.7
Pennsylvania	4,104,864.5	4,092,542.5	12,322.0
Rhode Island	750,257.0	722,584.7	27,672.4
South Carolina	667,768.3	645,951.1	21,817.2
South Dakota	89,152.7	88,897.7	255.0
Tennessee	4,091,509.7	3,578,413.6	513,096.1
Texas	5,132,018.1	5,067,493.3	64,524.8
Utah	1,301,136.4	1,301,136.4	0.0
Vermont	120,795.1	119,948.0	847.1
Virginia	8,132,740.7	8,028,901.8	103,838.9
Washington	3,251,187.6	3,195,255.2	55,932.3

TABLE 88

Federal obligations for research and experimental development and for R&D plant for selected agencies, by state or location: FY 2019

(Dollars in thousands)

State or location	Total	R&D	R&D plant
West Virginia	142,665.2	141,895.2	770.0
Wisconsin	852,075.0	839,542.6	12,532.4
Wyoming	78,203.3	67,645.9	10,557.3
Outlying areas	539,028.3	520,697.2	18,331.1
Puerto Rico	97,227.1	81,769.7	15,457.4
Other areas ^a	441,801.2	438,927.5	2,873.7
Offices abroad ^b	4,335.6	4,335.6	0.0
Undistributed ^c	3,073,110.3	3,073,110.3	0.0

^a Includes American Samoa, Baker Island, Guam, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Islands, Navassa Island, Northern Mariana Islands, Palmyra Atoll, U.S. Virgin Islands, and Wake Island.

^b Includes R&D performed or administered in foreign countries by the U.S. government and federal obligations for R&D plant located in foreign countries.

^c Department of Defense (DOD) obligations for which the location of performance is not reported, and Department of Health and Human Services' Biomedical Advanced Research and Development Authority obligations for which the location of performance could not be reported for FY 2019.

Note(s):

Because of rounding, detail may not add to total. Eleven agencies are required to report data for this section of the survey: the Departments of Agriculture, Commerce, Defense, Energy, Health and Human Services, Homeland Security, the Interior, and Transportation; the Environmental Protection Agency; the National Aeronautics and Space Administration; and the National Science Foundation. Obligations of these 11 agencies represented more than 97% of total federal R&D and R&D plant obligations in FY 2019. Geographic distribution of DOD development funding to industry reflects location of prime contractors and not the numerous subcontractors who perform much of the R&D.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 89

Federal obligations for research and experimental development for selected agencies, by state or location and performer: FY 2019

(Dollars in thousands)

State or location	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
All locations	138,170,254.9	37,361,168.2	44,229,941.4	6,065,175.1	33,717,365.9	5,347,925.4	7,700,190.3	3,169,452.6	579,036.0
Alabama	5,414,464.9	1,550,954.6	3,332,046.7	0.0	471,669.4	0.0	43,379.3	0.0	16,414.9
Alaska	334,240.4	120,210.2	71,578.6	0.0	103,762.1	0.0	6,780.5	0.0	31,909.1
Arizona	2,001,235.9	143,412.5	1,331,118.3	0.0	458,738.0	0.0	55,919.4	0.0	12,047.8
Arkansas	179,019.8	27,559.7	52,738.7	0.0	88,780.8	0.0	6,892.7	0.0	3,047.9
California	19,158,610.5	2,745,383.3	5,918,382.0	1,134,746.6	4,535,729.8	3,346,651.2	1,138,293.9	314,358.8	25,064.9
Colorado	5,267,919.7	1,390,348.6	2,548,226.2	0.0	715,603.1	175,998.9	93,209.8	333,306.0	11,227.1
Connecticut	2,673,235.2	22,463.8	1,955,329.4	0.0	659,319.9	0.0	29,619.7	0.0	6,502.3
Delaware	163,086.6	4,326.4	27,032.1	0.0	122,222.6	0.0	4,639.7	0.0	4,865.9
District of Columbia	6,228,175.8	4,531,606.0	858,408.3	40,679.3	286,121.8	151,531.6	348,468.9	3,167.6	8,192.2
Florida	3,892,005.0	1,141,703.6	1,657,003.3	0.0	924,133.0	0.0	159,240.5	0.0	9,924.6
Georgia	1,503,918.0	283,437.3	202,102.4	0.0	985,832.7	0.0	24,018.6	0.0	8,527.1
Hawaii	411,940.0	169,804.3	98,594.8	0.0	126,866.0	0.0	16,021.8	0.0	653.0
Idaho	919,915.3	38,894.7	165,860.0	615,398.7	93,360.6	0.0	2,628.8	0.0	3,772.5
Illinois	2,998,344.6	204,026.5	391,241.1	0.0	1,359,822.1	951,544.4	81,944.7	0.0	9,765.8
Indiana	894,094.8	150,660.4	169,643.4	0.0	566,372.1	0.0	664.7	0.0	6,754.2
Iowa	517,779.2	69,061.2	130,321.0	0.0	284,708.6	29,851.2	1,235.3	0.0	2,601.9
Kansas	282,617.3	63,228.8	13,031.9	0.0	203,061.3	0.0	1,643.5	0.0	1,651.7
Kentucky	313,350.7	7,203.5	34,194.1	0.0	265,399.6	0.0	1,515.9	0.0	5,037.6
Louisiana	432,060.3	58,857.2	138,215.9	0.0	221,996.0	0.0	2,441.4	0.0	10,549.8
Maine	189,013.5	3,779.5	11,662.7	0.0	59,315.8	0.0	110,399.9	0.0	3,855.6
Maryland	16,992,340.3	10,839,509.2	3,232,809.8	492,255.4	2,030,696.7	0.0	344,044.4	36,463.2	16,561.6
Massachusetts	6,837,816.2	396,103.5	2,195,471.6	0.0	1,855,029.3	397,940.7	1,869,817.9	116,157.2	7,295.9
Michigan	2,053,699.5	198,365.1	607,896.2	0.0	1,111,334.9	0.0	129,222.7	0.0	6,880.7
Minnesota	1,029,355.9	43,778.2	223,183.4	0.0	451,217.4	0.0	302,832.3	0.0	8,344.6
Mississippi	505,111.8	257,876.8	62,255.3	0.0	177,206.9	0.0	992.4	0.0	6,780.4
Missouri	2,375,132.7	141,860.0	1,496,564.5	0.0	694,830.8	0.0	36,738.7	0.0	5,138.7
Montana	191,393.8	57,405.3	25,471.6	0.0	101,242.7	0.0	4,613.1	0.0	2,661.2
Nebraska	243,708.3	33,689.4	12,340.7	0.0	174,619.2	0.0	19,495.7	0.0	3,563.3
Nevada	375,083.5	13,123.4	275,039.9	0.0	77,954.2	0.0	1,079.8	0.0	7,886.2
New Hampshire	669,304.6	20,849.8	474,116.1	0.0	164,238.4	0.0	8,892.9	0.0	1,207.4
New Jersey	2,834,421.1	1,538,376.5	648,862.5	0.0	479,910.8	127,714.1	32,759.7	0.0	6,797.5
New Mexico	3,755,707.3	738,100.0	569,770.2	2,268,755.8	151,185.2	0.0	22,253.3	0.0	5,642.8

TABLE 89

Federal obligations for research and experimental development for selected agencies, by state or location and performer: FY 2019

(Dollars in thousands)

State or location	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
New York	6,162,335.7	160,843.1	1,096,634.3	1,017,693.0	2,869,081.9	0.0	432,960.0	478,647.1	106,476.2
North Carolina	2,417,439.8	317,219.1	357,888.5	0.0	1,540,021.5	0.0	185,759.1	0.0	16,551.6
North Dakota	73,020.1	29,938.6	1,144.5	0.0	40,608.3	0.0	674.5	0.0	654.3
Ohio	5,188,238.0	2,288,898.1	1,741,143.7	0.0	874,282.5	0.0	255,612.5	0.0	28,301.2
Oklahoma	505,865.6	215,412.4	59,289.8	0.0	200,204.9	0.0	26,934.2	0.0	4,024.4
Oregon	696,901.8	71,695.4	129,331.5	0.0	466,607.5	0.0	20,525.0	0.0	8,742.4
Pennsylvania	4,092,542.5	380,776.6	714,711.8	459,365.0	2,128,287.0	35,178.0	365,667.8	0.0	8,556.3
Rhode Island	722,584.7	270,394.8	139,358.9	0.0	213,156.5	0.0	93,923.8	0.0	5,750.6
South Carolina	645,951.1	94,934.0	179,107.1	34,681.1	262,199.9	0.0	67,308.7	0.0	7,720.3
South Dakota	88,897.7	15,668.9	19,702.3	0.0	28,840.9	0.0	18,304.0	0.0	6,381.5
Tennessee	3,578,413.6	1,002,594.3	740,069.1	1,600.1	317,158.5	0.0	445,344.6	1,066,175.1	5,471.9
Texas	5,067,493.3	888,777.4	2,159,499.9	0.0	1,863,276.3	0.0	148,302.5	4,737.6	2,899.5
Utah	1,301,136.4	172,150.0	600,103.8	0.0	519,871.4	0.0	2,970.9	0.0	6,040.4
Vermont	119,948.0	8,264.9	30,866.8	0.0	77,544.0	0.0	250.0	0.0	3,022.4
Virginia	8,028,901.8	2,250,870.4	4,501,403.8	0.0	601,130.0	131,515.1	121,443.3	408,772.9	13,766.3
Washington	3,195,255.2	357,337.4	1,029,251.1	0.0	841,535.2	0.0	536,123.9	407,666.9	23,340.7
West Virginia	141,895.2	46,898.7	24,609.3	0.0	50,315.0	0.0	12,410.3	0.0	7,662.0
Wisconsin	839,542.6	54,827.2	96,258.0	0.0	644,517.1	0.0	39,519.7	0.0	4,420.6
Wyoming	67,645.9	24,654.8	6,178.2	0.0	33,551.1	0.0	150.0	0.0	3,111.8
Outlying areas	520,697.2	376,479.9	5,705.9	0.0	82,136.2	0.0	1,425.7	0.0	54,949.6
Puerto Rico	81,769.7	5,601.3	2,288.4	0.0	70,994.3	0.0	520.5	0.0	2,365.2
Other areas ^b	438,927.5	370,878.6	3,417.5	0.0	11,141.9	0.0	905.2	0.0	52,584.4
Offices abroad ^c	4,335.6	620.8	3,304.1	0.0	344.0	0.0	0.6	0.0	66.2
Undistributed ^d	3,073,110.3	1,325,952.1	1,663,866.4	0.0	60,414.2	0.0	22,877.5	0.0	0.0

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.^b Includes American Samoa, Baker Island, Guam, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Islands, Navassa Island, Northern Mariana Islands, Palmyra Atoll, U.S. Virgin Islands, and Wake Island.^c Includes R&D performed or administered in foreign countries by the U.S. government.^d Undistributed totals include Department of Defense (DOD) obligations for which the location of performance is not reported, and Department of Health and Human Services' Biomedical Advanced Research and Development Authority obligations for which the location of performance could not be reported for FY 2019.

Note(s):

Because of rounding, detail may not add to total. Eleven agencies are required to report data for this section of the survey: the Departments of Agriculture, Commerce, Defense, Energy, Health and Human Services, Homeland Security, the Interior, and Transportation; the Environmental Protection Agency; the National Aeronautics and Space Administration; and the National Science Foundation. Obligations of these 11 agencies represented more than 97% of total federal R&D obligations in FY 2019. Geographic distribution of DOD development funding to industry reflects location of prime contractors and not the numerous subcontractors who perform much of the R&D.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 90

Federal obligations for R&D plant for selected agencies, by state or location and performer: FY 2019

(Dollars in thousands)

State or location	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
All locations	4,329,453.9	1,057,823.3	352,113.3	428,268.6	513,972.8	850,027.0	169,824.3	956,249.0	1,175.7
Alabama	125,340.2	28,231.0	95,020.2	0.0	2,089.0	0.0	0.0	0.0	0.0
Alaska	6,648.3	6,341.9	0.0	0.0	306.4	0.0	0.0	0.0	0.0
Arizona	12,537.1	1,037.5	8.8	0.0	11,490.7	0.0	0.0	0.0	0.0
Arkansas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
California	676,511.6	58,527.3	19,376.3	178,303.3	38,222.1	382,082.6	0.0	0.0	0.0
Colorado	365,052.1	18,917.4	36,559.6	0.0	4,115.1	0.0	0.0	305,460.0	0.0
Connecticut	1,481.4	1,306.0	0.0	0.0	175.4	0.0	0.0	0.0	0.0
Delaware	9,559.9	0.0	0.0	0.0	9,559.9	0.0	0.0	0.0	0.0
District of Columbia	150,500.7	58,562.7	8,617.4	0.0	1,149.1	0.0	82,171.4	0.0	0.0
Florida	33,775.9	20,057.9	8,463.2	0.0	5,254.8	0.0	0.0	0.0	0.0
Georgia	6,592.6	3,798.6	112.3	0.0	2,681.6	0.0	0.0	0.0	0.0
Hawaii	24,289.5	11,713.1	0.0	0.0	9,438.2	0.0	3,138.2	0.0	0.0
Idaho	3,395.0	0.0	0.0	2,990.0	405.0	0.0	0.0	0.0	0.0
Illinois	471,335.8	15,379.3	866.5	0.0	10,218.5	444,871.6	0.0	0.0	0.0
Indiana	8,852.3	2,550.0	0.0	0.0	6,302.3	0.0	0.0	0.0	0.0
Iowa	2,081.8	360.1	32.9	0.0	688.8	1,000.0	0.0	0.0	0.0
Kansas	12,199.5	11,196.4	2.5	0.0	1,000.6	0.0	0.0	0.0	0.0
Kentucky	6,823.4	120.9	0.0	0.0	6,702.5	0.0	0.0	0.0	0.0
Louisiana	25,859.4	18,660.7	3,663.0	0.0	3,535.7	0.0	0.0	0.0	0.0
Maine	350.0	0.0	0.0	0.0	350.0	0.0	0.0	0.0	0.0
Maryland	648,412.2	534,777.6	108,348.3	0.0	5,286.3	0.0	0.0	0.0	0.0
Massachusetts	39,754.5	0.0	20,014.9	0.0	9,385.9	700.0	9,653.7	0.0	0.0
Michigan	84,619.7	498.3	0.0	0.0	84,121.3	0.0	0.0	0.0	0.0
Minnesota	2,992.0	0.0	228.0	0.0	2,764.0	0.0	0.0	0.0	0.0
Mississippi	13,552.4	13,419.5	0.0	0.0	132.9	0.0	0.0	0.0	0.0
Missouri	11,126.3	0.0	0.0	0.0	11,126.3	0.0	0.0	0.0	0.0
Montana	19.1	0.0	19.1	0.0	0.0	0.0	0.0	0.0	0.0
Nebraska	841.6	0.0	0.0	0.0	841.6	0.0	0.0	0.0	0.0
Nevada	977.4	0.0	0.0	0.0	977.4	0.0	0.0	0.0	0.0
New Hampshire	1,274.3	256.6	14.8	0.0	1,002.9	0.0	0.0	0.0	0.0
New Jersey	80,847.5	35,800.8	29,808.4	0.0	3,712.3	11,526.0	0.0	0.0	0.0
New Mexico	256,783.6	5,422.4	0.0	246,975.3	4,385.9	0.0	0.0	0.0	0.0

TABLE 90

Federal obligations for R&D plant for selected agencies, by state or location and performer: FY 2019

(Dollars in thousands)

State or location	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
New York	129,654.7	14,928.6	166.0	0.0	10,091.6	0.0	46.0	103,792.5	630.0
North Carolina	22,935.4	2,754.9	1,841.9	0.0	18,338.6	0.0	0.0	0.0	0.0
North Dakota	229.4	0.0	0.0	0.0	229.4	0.0	0.0	0.0	0.0
Ohio	94,547.0	345.2	940.2	0.0	18,721.0	0.0	73,995.0	0.0	545.7
Oklahoma	10,806.3	2,192.9	121.2	0.0	8,492.2	0.0	0.0	0.0	0.0
Oregon	144,397.7	23,588.6	183.3	0.0	120,625.8	0.0	0.0	0.0	0.0
Pennsylvania	12,322.0	6,316.8	122.7	0.0	3,614.4	2,268.0	0.0	0.0	0.0
Rhode Island	27,672.4	24,850.8	209.1	0.0	2,612.4	0.0	0.0	0.0	0.0
South Carolina	21,817.2	19,767.7	541.5	0.0	1,508.0	0.0	0.0	0.0	0.0
South Dakota	255.0	0.0	0.0	0.0	255.0	0.0	0.0	0.0	0.0
Tennessee	513,096.1	14,488.2	155.6	0.0	2,324.0	0.0	0.0	496,128.3	0.0
Texas	64,524.8	5,000.1	9,862.8	0.0	49,661.8	0.0	0.0	0.0	0.0
Utah	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vermont	847.1	0.0	0.0	0.0	847.1	0.0	0.0	0.0	0.0
Virginia	103,838.9	86,813.3	6,377.5	0.0	2,819.1	7,578.9	50.0	200.0	0.0
Washington	55,932.3	3,774.8	0.0	0.0	1,489.3	0.0	0.0	50,668.2	0.0
West Virginia	770.0	0.0	0.0	0.0	0.0	0.0	770.0	0.0	0.0
Wisconsin	12,532.4	1,086.6	0.0	0.0	11,445.9	0.0	0.0	0.0	0.0
Wyoming	10,557.3	0.0	0.0	0.0	10,557.3	0.0	0.0	0.0	0.0
Outlying areas	18,331.1	4,978.9	435.1	0.0	12,917.1	0.0	0.0	0.0	0.0
Puerto Rico	15,457.4	2,540.3	0.0	0.0	12,917.1	0.0	0.0	0.0	0.0
Other areas ^b	2,873.7	2,438.6	435.1	0.0	0.0	0.0	0.0	0.0	0.0
Offices abroad ^c	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.^b Includes American Samoa, Baker Island, Guam, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Islands, Navassa Island, Northern Mariana Islands, Palmyra Atoll, U.S. Virgin Islands, and Wake Island.^c Includes federal obligations for R&D plant located in foreign countries.**Note(s):**

Because of rounding, detail may not add to total. Eleven agencies are required to report data for this section of the survey: the Departments of Agriculture, Commerce, Defense, Energy, Health and Human Services, Homeland Security, the Interior, and Transportation; the Environmental Protection Agency; the National Aeronautics and Space Administration; and the National Science Foundation. Obligations of these 11 agencies represented more than 98% of total federal R&D plant obligations in FY 2019.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 91

Federal obligations for research and experimental development, by state or location and selected agency: FY 2019

(Dollars in thousands)

State or location	Total	DHS	DOC	DOD	DOE	DOI	DOT	EPA	HHS	NASA	NSF	USDA
All locations	138,170,254.9	637,191.0	1,533,324.0	58,235,775.6	14,374,516.6	824,028.5	1,011,941.1	485,305.0	38,926,197.0	13,536,853.3	5,971,088.2	2,634,034.6
Alabama	5,414,464.9	3,241.0	6,782.3	3,552,420.4	13,380.5	4,866.3	15,109.6	24.4	399,045.8	1,357,203.3	36,972.8	25,418.6
Alaska	334,240.4	4,226.4	8,128.1	124,183.7	4,809.7	84,056.4	2,908.9	0.0	18,841.1	18,223.3	54,723.1	14,139.5
Arizona	2,001,235.9	4,590.6	1,762.5	1,416,045.8	39,853.3	7,505.4	4,390.1	788.4	269,023.2	115,832.3	109,759.0	31,685.2
Arkansas	179,019.8	0.0	0.0	52,820.8	1,428.7	3,943.1	4,222.2	0.0	57,139.7	1,661.6	15,109.3	42,694.4
California	19,158,610.5	63,035.9	18,793.1	7,488,037.8	2,535,112.6	65,568.3	38,011.2	13,947.4	4,428,263.5	3,609,902.4	749,289.7	148,648.6
Colorado	5,267,919.7	15,115.2	260,698.5	2,046,625.7	413,474.7	64,376.9	27,117.1	5,865.1	428,240.5	1,614,311.7	330,062.9	62,031.4
Connecticut	2,673,235.2	16,411.2	18,123.8	1,802,544.1	51,682.6	2,204.6	2,803.5	1,687.7	585,714.9	123,117.8	61,326.0	7,619.2
Delaware	163,086.6	628.4	16,140.2	25,946.6	18,138.0	2,208.2	4,874.7	0.0	50,537.6	6,370.1	29,631.5	8,611.4
District of Columbia	6,228,175.8	66,717.8	26,501.8	3,621,713.3	1,081,671.4	13,568.1	181,477.4	101,537.5	270,857.6	211,947.7	265,331.9	386,851.4
Florida	3,892,005.0	12,496.9	54,316.8	2,375,829.8	46,373.8	45,106.8	29,626.1	10,645.7	685,322.7	344,862.2	209,858.0	77,566.3
Georgia	1,503,918.0	3,558.5	4,784.5	504,719.4	38,762.1	2,861.7	10,614.2	5,893.9	688,313.0	24,253.4	139,391.6	80,765.9
Hawaii	411,940.0	0.1	5,049.9	253,431.9	9,097.2	3,751.1	202.0	0.0	53,018.8	28,188.8	40,081.5	19,118.8
Idaho	919,915.3	1,532.4	0.0	40,815.5	767,580.9	11,522.7	901.6	0.0	17,417.9	25,450.7	25,256.4	29,437.2
Illinois	2,998,344.6	17,728.3	1,725.7	460,394.6	1,134,187.4	8,980.2	12,502.9	144.4	1,010,645.1	35,897.4	250,042.5	66,096.1
Indiana	894,094.8	226.0	2,794.1	327,028.8	34,088.3	3,790.5	7,154.7	1,463.4	318,038.8	21,258.2	151,388.6	26,863.6
Iowa	517,779.2	0.0	1,029.6	133,894.4	37,954.2	8,515.9	7,444.6	141.4	205,515.8	6,834.2	38,071.3	78,377.8
Kansas	282,617.3	0.0	904.0	30,869.3	10,554.1	1,798.3	6,695.1	3.0	114,879.6	3,845.1	30,979.2	82,089.6
Kentucky	313,350.7	880.0	316.9	20,316.7	10,381.0	3,081.1	3,094.0	0.0	225,335.3	4,043.3	23,725.5	22,176.9
Louisiana	432,060.3	881.2	3,207.7	124,175.1	4,356.4	23,545.7	5,272.5	343.0	174,399.5	18,952.9	29,868.7	47,057.6
Maine	189,013.5	0.3	6,364.3	24,502.4	1,950.2	1,489.4	6,752.0	40.7	116,403.8	2,807.1	19,819.2	8,884.1
Maryland	16,992,340.3	71,659.7	732,639.0	4,139,041.5	68,262.6	79,909.4	37,558.8	32,782.7	9,409,562.1	1,952,709.3	294,741.9	173,473.4
Massachusetts	6,837,816.2	53,049.8	52,403.7	2,862,295.5	146,291.8	9,988.7	74,964.0	15,000.7	2,972,597.6	161,524.5	461,775.9	27,923.9
Michigan	2,053,699.5	3,361.1	10,074.5	864,445.1	74,746.2	3,645.8	17,921.5	511.7	812,015.3	23,654.9	217,257.5	26,065.9
Minnesota	1,029,355.9	2.7	1,741.0	217,671.8	26,852.0	7,458.7	6,944.9	9,228.3	623,396.7	7,504.3	76,602.9	51,952.7
Mississippi	505,111.8	9.5	27,431.0	185,024.6	5,867.7	3,482.3	7,058.8	0.0	57,893.1	94,318.0	17,960.7	106,066.1
Missouri	2,375,132.7	3,735.7	1,051.7	1,029,961.1	518,222.5	5,597.5	12,128.0	3,760.2	635,947.0	52,863.7	47,196.3	64,668.9
Montana	191,393.8	997.2	404.5	23,920.1	3,579.3	8,963.1	3,269.7	0.0	83,499.3	8,485.4	27,990.7	30,284.4
Nebraska	243,708.3	0.8	791.5	15,153.5	8,812.3	736.6	6,217.7	0.0	127,122.7	693.8	32,319.9	51,859.6
Nevada	375,083.5	318.9	486.2	149,426.2	117,673.6	11,691.3	2,856.9	*	42,861.3	20,921.0	21,477.5	7,370.4
New Hampshire	669,304.6	6.5	8,120.2	448,162.4	17,768.9	3,570.9	776.5	150.1	119,409.2	26,527.6	35,765.4	9,047.0
New Jersey	2,834,421.1	3,362.8	33,255.6	2,104,294.2	162,048.3	3,380.8	51,915.6	3,461.4	309,235.1	25,121.5	127,077.4	11,268.5
New Mexico	3,755,707.3	36,897.1	3,985.6	1,505,216.9	1,998,745.9	6,408.3	4,840.4	630.5	96,042.9	48,953.5	38,616.5	15,369.7
New York	6,162,335.7	28,011.8	10,472.3	1,035,227.9	1,629,011.2	24,394.1	16,617.3	3,701.7	2,786,296.2	160,069.4	401,564.5	66,969.3
North Carolina	2,417,439.8	6,072.3	16,094.1	248,235.1	46,336.5	9,323.0	17,559.8	112,289.3	1,743,122.5	9,409.7	146,599.1	62,398.4
North Dakota	73,020.1	0.0	0.0	3,204.6	0.0	75.9	3,528.6	811.7	19,625.5	404.8	5,991.4	39,377.7

TABLE 91

Federal obligations for research and experimental development, by state or location and selected agency: FY 2019

(Dollars in thousands)

State or location	Total	DHS	DOC	DOD	DOE	DOI	DOT	EPA	HHS	NASA	NSF	USDA
Ohio	5,188,238.0	1,067.9	2,736.5	3,787,141.8	65,733.6	5,484.7	36,189.7	62,285.9	873,454.0	221,648.3	99,055.7	33,439.8
Oklahoma	505,865.6	5,610.0	61,205.9	154,646.7	18,063.5	55,459.2	16,009.8	6,542.3	106,910.1	27,408.3	28,378.1	25,631.8
Oregon	696,901.8	0.0	7,221.2	98,681.6	24,964.2	17,992.6	6,153.6	14,582.4	384,574.7	11,582.0	68,271.1	62,878.4
Pennsylvania	4,092,542.5	5,620.5	4,561.0	1,157,130.1	535,981.3	4,010.4	26,215.5	3,416.4	1,923,654.9	86,507.9	265,916.8	79,527.6
Rhode Island	722,584.7	2.7	6,290.8	415,502.7	7,309.4	2,671.7	1,532.5	10,885.9	222,078.3	3,197.0	50,364.4	2,749.3
South Carolina	645,951.1	6,230.3	17,569.5	297,827.8	40,445.9	3,941.8	5,587.6	796.2	207,579.9	4,444.3	35,830.0	25,697.8
South Dakota	88,897.7	1,437.1	0.0	12,859.1	2,902.3	1,211.7	3,518.8	0.0	26,304.1	14,757.8	15,284.5	10,622.3
Tennessee	3,578,413.6	4,789.0	157.2	617,753.5	1,545,496.5	7,330.0	8,828.3	25,429.4	572,730.3	701,788.1	60,304.3	33,807.1
Texas	5,067,493.3	17,446.9	8,003.9	1,863,173.9	78,331.3	9,765.8	9,857.3	4,862.6	1,322,533.3	1,336,483.8	322,348.5	94,685.8
Utah	1,301,136.4	586.8	440.4	478,638.3	208,409.5	4,650.0	3,481.1	449.9	224,372.8	297,976.1	50,900.4	31,231.1
Vermont	119,948.0	1,048.2	1,239.7	26,655.0	4,415.3	4,426.0	972.1	0.0	59,259.4	676.5	5,087.0	16,168.8
Virginia	8,028,901.8	170,212.4	8,440.8	6,042,694.8	225,616.5	93,025.8	236,250.5	27,426.6	505,375.2	566,367.2	127,101.8	26,390.2
Washington	3,195,255.2	3,355.3	71,544.0	1,218,605.3	441,158.5	25,786.9	11,617.8	3,739.9	1,155,393.7	77,732.9	128,255.0	58,065.9
West Virginia	141,895.2	679.1	167.6	5,869.2	25,161.5	369.3	1,641.4	0.0	61,631.8	2,158.7	12,792.7	31,423.9
Wisconsin	839,542.6	348.8	4,476.1	86,786.1	66,657.7	15,137.5	5,234.9	33.3	473,342.2	14,151.9	101,860.2	71,513.8
Wyoming	67,645.9	0.0	864.7	3,066.8	2,876.9	25,994.0	1,798.8	0.0	11,429.4	1,282.4	17,301.4	3,031.6
Outlying areas	520,697.2	0.0	1,963.8	370,477.8	1,936.6	5,404.1	1,719.1	0.0	103,814.2	565.0	18,250.1	16,566.7
Puerto Rico	81,769.7	0.0	1,547.5	1,762.9	123.5	404.1	0.0	0.0	51,190.8	565.0	16,381.8	9,794.0
Other areas ^a	438,927.5	0.0	416.3	368,714.9	1,813.0	5,000.0	1,719.1	0.0	52,623.4	0.0	1,868.3	6,772.7
Offices abroad ^b	4,335.6	0.0	66.2	3,736.3	0.0	0.0	0.0	0.0	0.0	0.0	160.0	373.2
Undistributed ^c	3,073,110.3	0.0	0.0	2,336,932.3	0.0	0.0	0.0	0.0	736,178.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50.

DHS = Department of Homeland Security; DOC = Department of Commerce; DOD = Department of Defense; DOE = Department of Energy; DOI = Department of the Interior; DOT = Department of Transportation; EPA = Environmental Protection Agency; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NSF = National Science Foundation; USDA = Department of Agriculture.

^a Includes American Samoa, Baker Island, Guam, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Islands, Navassa Island, Northern Mariana Islands, Palmyra Atoll, U.S. Virgin Islands, and Wake Island.

^b Includes R&D performed or administered in foreign countries by the U.S. government.

^c DOD obligations for which the location of performance is not reported, and HHS Biomedical Advanced Research and Development Authority obligations for which the location of performance could not be reported for FY 2019.

Note(s):

Because of rounding, detail may not add to total. Eleven agencies are required to report data for this section of the survey: DHS, DOC, DOD, DOE, DOI, DOT, EPA, HHS, NASA, NSF, and USDA. Obligations of these 11 agencies represented more than 97% of total federal R&D obligations in FY 2019. Geographic distribution of DOD development funding to industry reflects location of prime contractors and not the numerous subcontractors who perform much of the R&D. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Alabama	5,414,464.9	1,550,954.6	3,332,046.7	0.0	471,669.4	0.0	43,379.3	0.0	16,414.9
Department of Agriculture	25,418.6	8,943.9	0.6	0.0	15,861.6	0.0	75.0	0.0	537.5
Department of Commerce	6,782.3	153.0	0.0	0.0	6,579.7	0.0	49.6	0.0	0.0
Department of Defense, research	122,349.2	23,463.9	84,465.2	0.0	14,252.4	0.0	167.7	0.0	0.0
Department of Defense, total experimental development ^b	3,430,071.2	1,298,479.3	2,105,786.9	0.0	19,765.4	0.0	6,039.6	0.0	0.0
Department of Energy	13,380.5	0.0	2,462.8	0.0	9,092.4	0.0	1,825.3	0.0	0.0
Department of Health and Human Services	399,045.8	367.9	6,826.0	0.0	353,100.7	0.0	32,273.4	0.0	6,477.7
Department of Homeland Security	3,241.0	620.4	1,985.2	0.0	635.3	0.0	0.0	0.0	0.0
Department of the Interior	4,866.3	4,120.7	0.0	0.0	465.0	0.0	0.0	0.0	280.6
Department of Transportation	15,109.6	0.0	3,151.4	0.0	2,839.1	0.0	0.0	0.0	9,119.1
Environmental Protection Agency	24.4	0.0	0.0	0.0	24.4	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	1,357,203.3	214,805.5	1,127,118.6	0.0	13,148.1	0.0	2,131.0	0.0	0.0
National Science Foundation	36,972.8	0.0	250.0	0.0	35,905.2	0.0	817.6	0.0	0.0
Alaska	334,240.4	120,210.2	71,578.6	0.0	103,762.1	0.0	6,780.5	0.0	31,909.1
Department of Agriculture	14,139.5	9,851.4	0.0	0.0	1,961.2	0.0	73.6	0.0	2,253.3
Department of Commerce	8,128.1	4,624.3	0.0	0.0	2,863.1	0.0	255.1	0.0	385.6
Department of Defense, research	10,732.4	0.0	1,437.7	0.0	7,794.7	0.0	1,500.0	0.0	0.0
Department of Defense, total experimental development ^b	113,451.3	37,042.0	58,086.4	0.0	913.7	0.0	0.0	0.0	17,409.1
Department of Energy	4,809.7	0.0	0.0	0.0	4,560.2	0.0	50.0	0.0	199.5
Department of Health and Human Services	18,841.1	677.7	1,002.0	0.0	13,795.2	0.0	1,611.0	0.0	1,755.2
Department of Homeland Security	4,226.4	0.0	4,226.4	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	84,056.4	68,013.8	2,767.6	0.0	4,532.4	0.0	167.5	0.0	8,575.2
Department of Transportation	2,908.9	0.0	127.8	0.0	1,506.5	0.0	0.0	0.0	1,274.6

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
National Aeronautics and Space Administration	18,223.3	0.9	3,493.7	0.0	14,728.7	0.0	0.0	0.0	0.0
National Science Foundation	54,723.1	0.0	437.0	0.0	51,106.4	0.0	3,123.2	0.0	56.5
Arizona	2,001,235.9	143,412.5	1,331,118.3	0.0	458,738.0	0.0	55,919.4	0.0	12,047.8
Department of Agriculture	31,685.2	22,115.4	18.6	0.0	8,811.2	0.0	740.0	0.0	0.0
Department of Commerce	1,762.5	0.0	37.0	0.0	1,650.6	0.0	0.0	0.0	75.0
Department of Defense, research	96,456.8	3,789.4	48,573.4	0.0	43,793.9	0.0	300.1	0.0	0.0
Department of Defense, total experimental development ^b	1,319,589.0	80,869.9	1,226,623.1	0.0	3,965.1	0.0	0.0	0.0	8,130.9
Department of Energy	39,853.3	0.0	8,855.3	0.0	30,924.0	0.0	0.0	0.0	74.0
Department of Health and Human Services	269,023.2	7,500.1	16,728.7	0.0	199,172.4	0.0	43,014.7	0.0	2,607.5
Department of Homeland Security	4,590.6	0.0	4,590.6	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	7,505.4	5,498.3	167.0	0.0	1,636.1	0.0	0.0	0.0	204.0
Department of Transportation	4,390.1	0.0	1,824.4	0.0	1,650.1	0.0	0.0	0.0	915.6
Environmental Protection Agency	788.4	0.0	300.6	0.0	487.8	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	115,832.3	23,639.5	19,917.0	0.0	61,158.7	0.0	11,117.1	0.0	0.0
National Science Foundation	109,759.0	0.0	3,482.5	0.0	105,488.1	0.0	747.5	0.0	40.8
Arkansas	179,019.8	27,559.7	52,738.7	0.0	88,780.8	0.0	6,892.7	0.0	3,047.9
Department of Agriculture	42,694.4	23,258.8	0.0	0.0	19,435.5	0.0	0.0	0.0	0.0
Department of Defense, research	8,357.1	82.7	1,858.5	0.0	6,415.9	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	44,463.7	423.1	43,937.9	0.0	102.8	0.0	0.0	0.0	0.0
Department of Energy	1,428.7	0.0	204.9	0.0	1,149.8	0.0	0.0	0.0	74.0
Department of Health and Human Services	57,139.7	0.0	4,811.8	0.0	45,283.4	0.0	6,892.7	0.0	151.8
Department of the Interior	3,943.1	3,793.7	0.0	0.0	149.4	0.0	0.0	0.0	0.0
Department of Transportation	4,222.2	0.0	0.0	0.0	1,400.1	0.0	0.0	0.0	2,822.1

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
National Aeronautics and Space Administration	1,661.6	1.4	1,015.6	0.0	644.6	0.0	0.0	0.0	0.0
National Science Foundation	15,109.3	0.0	910.0	0.0	14,199.3	0.0	0.0	0.0	0.0
California	19,158,610.5	2,745,383.3	5,918,382.0	1,134,746.6	4,535,729.8	3,346,651.2	1,138,293.9	314,358.8	25,064.9
Department of Agriculture	148,648.6	94,028.6	120.2	0.0	53,180.1	0.0	865.5	0.0	454.2
Department of Commerce	18,793.1	412.6	1,452.1	0.0	12,662.4	0.0	3,986.3	0.0	279.7
Department of Defense, research	974,825.5	157,215.7	321,942.6	27,153.4	379,513.1	13,764.6	70,043.2	5,014.0	178.9
Department of Defense, total experimental development ^b	6,513,212.4	2,115,755.2	4,005,319.3	62,969.0	42,439.2	1,329.3	21,257.5	262,315.2	1,827.7
Department of Energy	2,535,112.6	5,979.3	281,192.4	1,035,450.2	189,490.9	1,005,608.3	1,983.3	15,043.6	364.6
Department of Health and Human Services	4,428,263.5	0.0	337,270.4	3,169.2	3,087,109.4	20,551.4	977,106.2	0.0	3,056.9
Department of Homeland Security	63,035.9	19,669.8	29,606.0	5,929.6	1,233.5	2,862.1	0.0	3,517.0	217.9
Department of the Interior	65,568.3	51,878.1	1,175.4	0.0	9,095.1	0.0	217.2	0.0	3,202.4
Department of Transportation	38,011.2	2,125.7	11,437.3	0.0	9,714.2	0.0	1,375.0	0.0	13,358.9
Environmental Protection Agency	13,947.4	0.0	11,402.7	0.0	2,544.6	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	3,609,902.4	270,538.6	871,173.0	75.2	101,637.2	2,302,535.5	33,350.0	28,469.1	2,123.8
National Science Foundation	749,289.7	27,779.7	46,290.3	0.0	647,110.1	0.0	28,109.6	0.0	0.0
Colorado	5,267,919.7	1,390,348.6	2,548,226.2	0.0	715,603.1	175,998.9	93,209.8	333,306.0	11,227.1
Department of Agriculture	62,031.4	37,976.2	107.4	0.0	23,609.3	0.0	338.5	0.0	0.0
Department of Commerce	260,698.5	186,691.1	638.4	0.0	63,434.0	9,928.6	0.0	0.0	6.5
Department of Defense, research	80,648.3	10,271.8	25,054.7	0.0	44,735.2	0.0	202.4	384.1	0.0
Department of Defense, total experimental development ^b	1,965,977.5	68,478.1	1,884,624.0	0.0	5,213.4	0.0	4,500.0	3,162.0	0.0
Department of Energy	413,474.7	1,513.4	41,770.6	0.0	36,624.3	0.0	4,244.2	328,593.9	728.2
Department of Health and Human Services	428,240.5	1,075.6	34,435.2	0.0	337,506.5	0.0	48,418.9	0.0	6,804.3
Department of Homeland Security	15,115.2	13,276.2	1,313.7	0.0	525.3	0.0	0.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of the Interior	64,376.9	52,349.4	3,224.2	0.0	5,332.1	320.0	941.6	200.0	2,009.6
Department of Transportation	27,117.1	3,398.1	20,733.6	0.0	1,600.1	0.0	0.0	0.0	1,385.3
Environmental Protection Agency	5,865.1	928.2	1,604.8	0.0	3,332.1	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	1,614,311.7	1,013,039.7	522,819.0	0.0	61,739.9	13,401.2	3,311.8	0.0	0.0
National Science Foundation	330,062.9	1,350.9	11,900.6	0.0	131,950.9	152,349.2	31,252.3	966.0	293.1
Connecticut	2,673,235.2	22,463.8	1,955,329.4	0.0	659,319.9	0.0	29,619.7	0.0	6,502.3
Department of Agriculture	7,619.2	1,919.8	0.0	0.0	5,549.4	0.0	0.0	0.0	150.0
Department of Commerce	18,123.8	0.0	0.0	0.0	5,220.6	0.0	12,903.2	0.0	0.0
Department of Defense, research	43,141.8	0.0	24,093.0	0.0	14,321.7	0.0	4,727.2	0.0	0.0
Department of Defense, total experimental development ^b	1,759,402.3	3,806.3	1,754,006.4	0.0	1,589.6	0.0	0.0	0.0	0.0
Department of Energy	51,682.6	199.1	39,391.8	0.0	12,091.8	0.0	0.0	0.0	0.0
Department of Health and Human Services	585,714.9	0.0	14,944.4	0.0	554,782.5	0.0	11,922.6	0.0	4,065.3
Department of Homeland Security	16,411.2	10,438.4	5,600.3	0.0	372.4	0.0	0.0	0.0	0.0
Department of the Interior	2,204.6	1,053.8	469.2	0.0	571.8	0.0	0.0	0.0	109.8
Department of Transportation	2,803.5	0.0	556.8	0.0	69.5	0.0	0.0	0.0	2,177.2
Environmental Protection Agency	1,687.7	0.0	971.9	0.0	715.8	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	123,117.8	5,046.4	113,499.4	0.0	4,572.0	0.0	0.0	0.0	0.0
National Science Foundation	61,326.0	0.0	1,796.3	0.0	59,462.9	0.0	66.8	0.0	0.0
Delaware	163,086.6	4,326.4	27,032.1	0.0	122,222.6	0.0	4,639.7	0.0	4,865.9
Department of Agriculture	8,611.4	1,628.4	7.2	0.0	6,975.8	0.0	0.0	0.0	0.0
Department of Commerce	16,140.2	0.0	19.4	0.0	15,947.6	0.0	173.2	0.0	0.0
Department of Defense, research	19,048.8	23.4	2,184.5	0.0	16,840.9	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	6,897.8	845.0	5,199.8	0.0	853.0	0.0	0.0	0.0	0.0
Department of Energy	18,138.0	0.0	8,288.8	0.0	9,826.9	0.0	0.0	0.0	22.2

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Health and Human Services	50,537.6	0.0	6,504.5	0.0	40,255.9	0.0	3,641.1	0.0	136.1
Department of Homeland Security	628.4	0.0	628.4	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	2,208.2	1,829.6	0.0	0.0	378.7	0.0	0.0	0.0	0.0
Department of Transportation	4,874.7	0.0	16.7	0.0	150.4	0.0	0.0	0.0	4,707.5
National Aeronautics and Space Administration	6,370.1	0.0	3,499.8	0.0	2,870.3	0.0	0.0	0.0	0.0
National Science Foundation	29,631.5	0.0	683.0	0.0	28,123.2	0.0	825.4	0.0	0.0
District of Columbia	6,228,175.8	4,531,606.0	858,408.3	40,679.3	286,121.8	151,531.6	348,468.9	3,167.6	8,192.2
Department of Agriculture	386,851.4	358,758.8	25,936.3	0.0	727.2	0.0	1,420.4	0.0	8.8
Department of Commerce	26,501.8	21,928.0	3,929.7	0.0	281.6	0.0	362.6	0.0	0.0
Department of Defense, research	460,249.2	395,036.2	20,496.6	0.0	19,989.0	0.0	22,244.5	2,482.9	0.0
Department of Defense, total experimental development ^b	3,161,464.1	2,549,120.2	458,491.2	0.0	12,956.8	0.0	140,890.7	0.0	5.2
Department of Energy	1,081,671.4	892,641.0	111,000.3	40,207.0	35,080.3	0.0	2,305.7	0.0	437.2
Department of Health and Human Services	270,857.6	4,545.4	26,347.5	0.0	174,968.7	0.0	59,889.9	0.0	5,106.1
Department of Homeland Security	66,717.8	28,028.2	38,022.2	0.0	0.0	0.0	197.4	470.0	0.0
Department of the Interior	13,568.1	10,984.0	8.9	0.0	41.4	0.0	67.8	0.0	2,466.0
Department of Transportation	181,477.4	82,293.8	67,912.4	0.0	3,124.3	0.0	27,977.9	0.0	169.0
Environmental Protection Agency	101,537.5	49,349.4	46,595.8	472.3	4,226.2	679.1	0.0	214.7	0.0
National Aeronautics and Space Administration	211,947.7	137,580.5	55,079.0	0.0	9,713.9	0.0	9,574.3	0.0	0.0
National Science Foundation	265,331.9	1,340.4	4,588.6	0.0	25,012.6	150,852.6	83,537.8	0.0	0.0
Florida	3,892,005.0	1,141,703.6	1,657,003.3	0.0	924,133.0	0.0	159,240.5	0.0	9,924.6
Department of Agriculture	77,566.3	38,563.9	2.0	0.0	37,857.3	0.0	1,035.3	0.0	107.9
Department of Commerce	54,316.8	33,674.6	137.5	0.0	17,504.2	0.0	1,915.7	0.0	1,084.8
Department of Defense, research	236,892.1	95,812.2	69,774.9	0.0	61,338.9	0.0	9,966.1	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, total experimental development ^b	2,138,937.7	796,427.0	1,329,846.7	0.0	6,114.4	0.0	6,549.6	0.0	0.0
Department of Energy	46,373.8	0.0	9,973.3	0.0	36,337.6	0.0	0.0	0.0	62.9
Department of Health and Human Services	685,322.7	0.0	27,134.2	0.0	519,867.9	0.0	137,973.7	0.0	346.9
Department of Homeland Security	12,496.9	8,289.3	3,805.7	0.0	401.8	0.0	0.0	0.0	0.0
Department of the Interior	45,106.8	40,839.5	1,260.5	0.0	2,524.4	0.0	159.4	0.0	323.0
Department of Transportation	29,626.1	663.9	2,660.4	0.0	18,302.6	0.0	0.0	0.0	7,999.2
Environmental Protection Agency	10,645.7	8,663.2	350.5	0.0	1,632.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	344,862.2	118,770.1	203,736.2	0.0	21,657.7	0.0	698.2	0.0	0.0
National Science Foundation	209,858.0	0.0	8,321.4	0.0	200,594.2	0.0	942.4	0.0	0.0
Georgia	1,503,918.0	283,437.3	202,102.4	0.0	985,832.7	0.0	24,018.6	0.0	8,527.1
Department of Agriculture	80,765.9	47,290.4	6.2	0.0	33,444.2	0.0	25.0	0.0	0.0
Department of Commerce	4,784.5	0.0	230.5	0.0	4,553.9	0.0	0.0	0.0	0.0
Department of Defense, research	105,211.0	3,376.2	18,236.3	0.0	80,948.4	0.0	2,650.1	0.0	0.0
Department of Defense, total experimental development ^b	399,508.4	161,864.2	126,223.0	0.0	98,844.8	0.0	12,576.4	0.0	0.0
Department of Energy	38,762.1	0.0	9,383.2	0.0	26,420.7	0.0	2,958.2	0.0	0.0
Department of Health and Human Services	688,313.0	61,821.3	29,236.6	0.0	590,289.2	0.0	4,230.4	0.0	2,735.5
Department of Homeland Security	3,558.5	0.0	3,204.4	0.0	354.1	0.0	0.0	0.0	0.0
Department of the Interior	2,861.7	2,565.3	0.0	0.0	296.4	0.0	0.0	0.0	0.0
Department of Transportation	10,614.2	293.5	833.4	0.0	2,345.7	0.0	1,375.0	0.0	5,766.6
Environmental Protection Agency	5,893.9	5,878.6	15.3	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	24,253.4	347.8	9,212.1	0.0	14,693.4	0.0	0.0	0.0	0.0
National Science Foundation	139,391.6	0.0	5,521.2	0.0	133,641.9	0.0	203.5	0.0	25.0
Hawaii	411,940.0	169,804.3	98,594.8	0.0	126,866.0	0.0	16,021.8	0.0	653.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Agriculture	19,118.8	13,929.3	0.0	0.0	4,503.1	0.0	686.4	0.0	0.0
Department of Commerce	5,049.9	3,290.2	73.0	0.0	50.0	0.0	1,579.2	0.0	57.6
Department of Defense, research	53,638.7	3,423.8	31,024.2	0.0	11,224.6	0.0	7,961.3	0.0	4.8
Department of Defense, total experimental development ^b	199,793.2	146,387.9	51,881.9	0.0	1,288.0	0.0	232.1	0.0	3.2
Department of Energy	9,097.2	0.0	3,910.5	0.0	5,186.7	0.0	0.0	0.0	0.0
Department of Health and Human Services	53,018.8	0.0	5,263.3	0.0	44,054.3	0.0	3,116.3	0.0	584.9
Department of Homeland Security	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	3,751.1	2,483.2	0.0	0.0	1,267.9	0.0	0.0	0.0	0.0
Department of Transportation	202.0	0.0	0.0	0.0	200.0	0.0	0.0	0.0	2.0
National Aeronautics and Space Administration	28,188.8	289.9	5,023.8	0.0	22,874.5	0.0	0.0	0.0	0.6
National Science Foundation	40,081.5	0.0	1,418.1	0.0	36,216.8	0.0	2,446.5	0.0	0.0
Idaho	919,915.3	38,894.7	165,860.0	615,398.7	93,360.6	0.0	2,628.8	0.0	3,772.5
Department of Agriculture	29,437.2	20,269.7	0.1	0.0	9,149.6	0.0	17.8	0.0	0.0
Department of Defense, research	11,922.5	328.0	2,623.0	2,712.6	6,259.0	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	28,893.0	9,231.8	8,770.0	10,314.1	577.1	0.0	0.0	0.0	0.0
Department of Energy	767,580.9	968.5	130,308.6	600,839.6	34,770.1	0.0	0.0	0.0	694.1
Department of Health and Human Services	17,417.9	0.0	599.7	0.0	14,207.3	0.0	2,611.0	0.0	0.0
Department of Homeland Security	1,532.4	0.0	0.0	1,532.4	0.0	0.0	0.0	0.0	0.0
Department of the Interior	11,522.7	8,095.2	250.0	0.0	1,000.8	0.0	0.0	0.0	2,176.8
Department of Transportation	901.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	901.6
National Aeronautics and Space Administration	25,450.7	1.6	23,308.6	0.0	2,140.5	0.0	0.0	0.0	0.0
National Science Foundation	25,256.4	0.0	0.0	0.0	25,256.4	0.0	0.0	0.0	0.0
Illinois	2,998,344.6	204,026.5	391,241.1	0.0	1,359,822.1	951,544.4	81,944.7	0.0	9,765.8
Department of Agriculture	66,096.1	38,118.4	1,893.5	0.0	26,048.9	0.0	35.3	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Commerce	1,725.7	0.0	176.7	0.0	1,549.0	0.0	0.0	0.0	0.0
Department of Defense, research	131,903.8	14,614.1	19,151.9	0.0	93,736.8	2,253.0	248.0	0.0	1,900.0
Department of Defense, total experimental development ^b	328,490.8	92,472.4	220,932.8	0.0	6,723.7	0.0	8,362.0	0.0	0.0
Department of Energy	1,134,187.4	35,528.4	84,055.4	0.0	65,339.5	947,918.1	1,346.0	0.0	0.0
Department of Health and Human Services	1,010,645.1	60.1	39,109.8	0.0	908,560.4	0.0	57,305.9	0.0	5,609.1
Department of Homeland Security	17,728.3	12,625.8	6.0	0.0	3,988.2	1,108.3	0.0	0.0	0.0
Department of the Interior	8,980.2	8,076.6	0.0	0.0	903.6	0.0	0.0	0.0	0.0
Department of Transportation	12,502.9	1,748.9	2,525.4	0.0	1,331.6	265.0	4,375.3	0.0	2,256.7
Environmental Protection Agency	144.4	0.0	95.7	0.0	48.7	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	35,897.4	781.9	16,419.9	0.0	18,167.3	0.0	528.3	0.0	0.0
National Science Foundation	250,042.5	0.0	6,874.1	0.0	233,424.5	0.0	9,743.9	0.0	0.0
Indiana	894,094.8	150,660.4	169,643.4	0.0	566,372.1	0.0	664.7	0.0	6,754.2
Department of Agriculture	26,863.6	6,227.9	1.1	0.0	20,468.6	0.0	0.0	0.0	166.0
Department of Commerce	2,794.1	0.0	0.0	0.0	2,794.1	0.0	0.0	0.0	0.0
Department of Defense, research	61,660.2	9,519.9	10,262.3	0.0	41,387.4	0.0	490.6	0.0	0.0
Department of Defense, total experimental development ^b	265,368.5	131,392.7	131,147.3	0.0	2,654.4	0.0	174.1	0.0	0.0
Department of Energy	34,088.3	39.4	1,340.9	0.0	32,708.1	0.0	0.0	0.0	0.0
Department of Health and Human Services	318,038.8	0.0	7,665.8	0.0	307,409.2	0.0	0.0	0.0	2,963.8
Department of Homeland Security	226.0	0.0	0.0	0.0	226.0	0.0	0.0	0.0	0.0
Department of the Interior	3,790.5	3,181.3	0.0	0.0	609.2	0.0	0.0	0.0	0.0
Department of Transportation	7,154.7	0.0	1,781.5	0.0	1,748.8	0.0	0.0	0.0	3,624.4
Environmental Protection Agency	1,463.4	0.0	0.0	0.0	1,463.4	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	21,258.2	299.3	13,434.7	0.0	7,524.2	0.0	0.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
National Science Foundation	151,388.6	0.0	4,009.7	0.0	147,378.8	0.0	0.0	0.0	0.0
Iowa	517,779.2	69,061.2	130,321.0	0.0	284,708.6	29,851.2	1,235.3	0.0	2,601.9
Department of Agriculture	78,377.8	56,079.3	0.8	0.0	22,192.1	0.0	105.5	0.0	0.0
Department of Commerce	1,029.6	0.0	441.2	0.0	588.4	0.0	0.0	0.0	0.0
Department of Defense, research	24,822.8	2,771.0	13,978.1	0.0	7,694.1	379.6	0.0	0.0	0.0
Department of Defense, total experimental development ^b	109,071.6	1,185.7	106,645.4	0.0	1,240.5	0.0	0.0	0.0	0.0
Department of Energy	37,954.2	670.3	122.1	0.0	7,690.2	29,471.6	0.0	0.0	0.0
Department of Health and Human Services	205,515.8	0.0	5,469.5	0.0	198,543.2	0.0	1,117.8	0.0	385.3
Department of the Interior	8,515.9	8,190.7	0.0	0.0	283.8	0.0	11.9	0.0	29.5
Department of Transportation	7,444.6	0.0	632.5	0.0	4,624.9	0.0	0.0	0.0	2,187.1
Environmental Protection Agency	141.4	0.0	141.4	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	6,834.2	164.2	1,617.6	0.0	5,052.4	0.0	0.0	0.0	0.0
National Science Foundation	38,071.3	0.0	1,272.3	0.0	36,799.0	0.0	0.0	0.0	0.0
Kansas	282,617.3	63,228.8	13,031.9	0.0	203,061.3	0.0	1,643.5	0.0	1,651.7
Department of Agriculture	82,089.6	59,329.1	0.6	0.0	22,760.0	0.0	0.0	0.0	0.0
Department of Commerce	904.0	0.0	0.0	0.0	904.0	0.0	0.0	0.0	0.0
Department of Defense, research	22,919.1	1,096.3	498.1	0.0	20,701.8	0.0	622.9	0.0	0.0
Department of Defense, total experimental development ^b	7,950.2	1,355.5	5,622.4	0.0	969.6	0.0	2.6	0.0	0.0
Department of Energy	10,554.1	0.0	805.4	0.0	8,981.7	0.0	767.0	0.0	0.0
Department of Health and Human Services	114,879.6	0.0	4,129.5	0.0	110,276.9	0.0	251.0	0.0	222.2
Department of the Interior	1,798.3	1,447.9	0.0	0.0	350.4	0.0	0.0	0.0	0.0
Department of Transportation	6,695.1	0.0	76.0	0.0	5,189.6	0.0	0.0	0.0	1,429.5
Environmental Protection Agency	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	3,845.1	0.0	1,672.2	0.0	2,172.9	0.0	0.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
National Science Foundation	30,979.2	0.0	224.8	0.0	30,754.4	0.0	0.0	0.0	0.0
Kentucky	313,350.7	7,203.5	34,194.1	0.0	265,399.6	0.0	1,515.9	0.0	5,037.6
Department of Agriculture	22,176.9	3,937.5	*	0.0	17,743.7	0.0	111.7	0.0	383.9
Department of Commerce	316.9	0.0	0.0	0.0	316.9	0.0	0.0	0.0	0.0
Department of Defense, research	4,070.9	476.7	1,397.9	0.0	2,196.3	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	16,245.8	303.8	15,023.4	0.0	918.7	0.0	0.0	0.0	0.0
Department of Energy	10,381.0	0.0	4,211.7	0.0	6,169.3	0.0	0.0	0.0	0.0
Department of Health and Human Services	225,335.3	0.0	9,632.8	0.0	214,026.7	0.0	524.1	0.0	1,151.7
Department of Homeland Security	880.0	0.0	0.0	0.0	0.0	0.0	880.0	0.0	0.0
Department of the Interior	3,081.1	2,462.2	24.0	0.0	363.5	0.0	0.0	0.0	231.4
Department of Transportation	3,094.0	23.3	0.0	0.0	0.0	0.0	0.0	0.0	3,070.7
National Aeronautics and Space Administration	4,043.3	0.0	2,524.2	0.0	1,519.1	0.0	0.0	0.0	0.0
National Science Foundation	23,725.5	0.0	1,380.1	0.0	22,145.4	0.0	0.0	0.0	200.0
Louisiana	432,060.3	58,857.2	138,215.9	0.0	221,996.0	0.0	2,441.4	0.0	10,549.8
Department of Agriculture	47,057.6	31,743.8	0.9	0.0	14,682.1	0.0	0.0	0.0	630.7
Department of Commerce	3,207.7	151.2	0.0	0.0	3,056.5	0.0	0.0	0.0	0.0
Department of Defense, research	7,189.4	0.0	2,440.2	0.0	4,337.8	0.0	411.4	0.0	0.0
Department of Defense, total experimental development ^b	116,985.8	1,864.0	114,605.9	0.0	375.8	0.0	139.6	0.0	0.4
Department of Energy	4,356.4	0.0	1,658.7	0.0	2,575.5	0.0	0.0	0.0	122.1
Department of Health and Human Services	174,399.5	2,627.8	3,184.2	0.0	167,219.7	0.0	762.6	0.0	605.1
Department of Homeland Security	881.2	863.7	17.5	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	23,545.7	21,606.6	0.0	0.0	1,794.4	0.0	49.7	0.0	95.0
Department of Transportation	5,272.5	0.0	0.0	0.0	2,574.3	0.0	0.0	0.0	2,698.2
Environmental Protection Agency	343.0	0.0	343.0	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
National Aeronautics and Space Administration	18,952.9	0.0	15,295.7	0.0	1,317.5	0.0	0.0	0.0	2,339.7
National Science Foundation	29,868.7	0.0	669.8	0.0	24,062.4	0.0	1,078.0	0.0	4,058.4
Maine	189,013.5	3,779.5	11,662.7	0.0	59,315.8	0.0	110,399.9	0.0	3,855.6
Department of Agriculture	8,884.1	1,988.6	17.2	0.0	6,878.2	0.0	0.0	0.0	0.0
Department of Commerce	6,364.3	0.0	0.0	0.0	5,201.3	0.0	1,163.0	0.0	0.0
Department of Defense, research	11,702.0	0.0	428.4	0.0	10,461.8	0.0	811.7	0.0	0.0
Department of Defense, total experimental development ^b	12,800.4	487.3	4,472.8	0.0	6,727.4	0.0	1,113.0	0.0	0.0
Department of Energy	1,950.2	0.0	349.2	0.0	1,478.9	0.0	0.0	0.0	122.1
Department of Health and Human Services	116,403.8	0.0	5,134.0	0.0	8,393.5	0.0	100,634.9	0.0	2,241.4
Department of Homeland Security	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	1,489.4	1,232.5	72.4	0.0	0.0	0.0	0.0	0.0	184.5
Department of Transportation	6,752.0	0.0	255.0	0.0	5,179.5	0.0	10.0	0.0	1,307.5
Environmental Protection Agency	40.7	0.0	0.0	0.0	40.7	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	2,807.1	71.2	698.4	0.0	898.3	0.0	1,139.3	0.0	0.0
National Science Foundation	19,819.2	0.0	235.0	0.0	14,056.3	0.0	5,528.0	0.0	0.0
Maryland	16,992,340.3	10,839,509.2	3,232,809.8	492,255.4	2,030,696.7	0.0	344,044.4	36,463.2	16,561.6
Department of Agriculture	173,473.4	154,755.6	323.8	0.0	18,087.8	0.0	294.6	0.0	11.5
Department of Commerce	732,639.0	680,318.8	21,450.5	0.0	11,802.0	0.0	314.9	18,752.9	0.0
Department of Defense, research	530,443.9	244,547.1	134,569.6	957.5	108,094.1	0.0	41,993.9	200.0	81.8
Department of Defense, total experimental development ^b	3,608,597.6	1,943,679.9	1,117,799.0	359.0	523,030.4	0.0	23,514.1	196.0	19.2
Department of Energy	68,262.6	3,610.3	24,019.0	0.0	28,065.6	0.0	3,399.0	0.0	9,168.7
Department of Health and Human Services	9,409,562.1	7,389,127.1	429,297.2	490,939.0	1,014,751.4	0.0	83,286.1	*	2,161.3
Department of Homeland Security	71,659.7	11,142.4	39,507.1	0.0	1,276.9	0.0	2,419.0	17,314.3	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of the Interior	79,909.4	78,655.4	31.3	0.0	858.7	0.0	35.0	0.0	329.0
Department of Transportation	37,558.8	6,426.1	22,458.7	0.0	3,620.0	0.0	263.9	0.0	4,790.1
Environmental Protection Agency	32,782.7	0.0	29,385.1	0.0	3,397.6	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	1,952,709.3	322,973.7	1,223,933.1	0.0	223,422.1	0.0	182,380.3	0.0	0.0
National Science Foundation	294,741.9	4,272.8	190,035.5	0.0	94,290.1	0.0	6,143.4	0.0	0.0
Massachusetts	6,837,816.2	396,103.5	2,195,471.6	0.0	1,855,029.3	397,940.7	1,869,817.9	116,157.2	7,295.9
Department of Agriculture	27,923.9	11,989.4	3.4	0.0	15,116.9	0.0	814.2	0.0	0.0
Department of Commerce	52,403.7	35,595.2	479.3	0.0	16,300.8	0.0	0.0	0.0	28.5
Department of Defense, research	554,591.9	24,576.1	231,337.6	0.0	198,299.0	61,800.4	35,869.8	2,709.1	0.0
Department of Defense, total experimental development ^b	2,307,703.6	150,723.1	1,602,064.0	0.0	44,904.4	334,039.5	62,524.5	113,448.2	0.0
Department of Energy	146,291.8	0.0	55,334.5	0.0	89,964.4	0.0	863.4	0.0	129.6
Department of Health and Human Services	2,972,597.6	0.0	200,401.3	0.0	1,056,984.1	0.0	1,711,123.4	0.0	4,088.8
Department of Homeland Security	53,049.8	19,595.8	31,243.0	0.0	0.0	2,100.8	110.2	0.0	0.0
Department of the Interior	9,988.7	6,778.6	293.0	0.0	2,867.6	0.0	49.4	0.0	0.0
Department of Transportation	74,964.0	48,971.3	14,782.9	0.0	3,666.3	0.0	4,713.0	0.0	2,830.6
Environmental Protection Agency	15,000.7	1,237.6	6,122.7	0.0	7,640.4	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	161,524.5	96,636.4	30,537.2	0.0	27,604.9	0.0	6,746.0	0.0	0.0
National Science Foundation	461,775.9	0.0	22,872.8	0.0	391,680.5	0.0	47,004.2	0.0	218.4
Michigan	2,053,699.5	198,365.1	607,896.2	0.0	1,111,334.9	0.0	129,222.7	0.0	6,880.7
Department of Agriculture	26,065.9	3,346.1	6.8	0.0	22,643.1	0.0	70.0	0.0	0.0
Department of Commerce	10,074.5	378.0	0.0	0.0	9,296.7	0.0	391.6	0.0	8.2
Department of Defense, research	120,203.1	9,921.2	14,452.2	0.0	52,397.1	0.0	43,432.5	0.0	0.0
Department of Defense, total experimental development ^b	744,242.0	181,578.9	530,222.3	0.0	5,394.1	0.0	27,046.8	0.0	0.0
Department of Energy	74,746.2	0.0	11,668.9	0.0	62,477.3	0.0	600.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Health and Human Services	812,015.3	196.0	29,487.1	0.0	721,325.5	0.0	56,356.2	0.0	4,650.6
Department of Homeland Security	3,361.1	0.0	2,666.2	0.0	694.9	0.0	0.0	0.0	0.0
Department of the Interior	3,645.8	2,785.5	0.0	0.0	788.2	0.0	72.0	0.0	0.0
Department of Transportation	17,921.5	35.9	8,018.9	0.0	7,694.4	0.0	0.0	0.0	2,172.3
Environmental Protection Agency	511.7	0.0	349.2	0.0	162.5	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	23,654.9	123.5	5,442.7	0.0	18,088.8	0.0	0.0	0.0	0.0
National Science Foundation	217,257.5	0.0	5,581.9	0.0	210,372.4	0.0	1,253.6	0.0	49.6
Minnesota	1,029,355.9	43,778.2	223,183.4	0.0	451,217.4	0.0	302,832.3	0.0	8,344.6
Department of Agriculture	51,952.7	22,090.8	8.6	0.0	29,197.8	0.0	0.0	0.0	655.5
Department of Commerce	1,741.0	0.0	0.0	0.0	1,741.0	0.0	0.0	0.0	0.0
Department of Defense, research	75,401.3	888.0	56,102.1	0.0	18,197.8	0.0	213.4	0.0	0.0
Department of Defense, total experimental development ^b	142,270.5	4,719.3	109,725.8	0.0	9,825.4	0.0	18,000.0	0.0	0.0
Department of Energy	26,852.0	25.8	6,146.3	0.0	20,679.9	0.0	0.0	0.0	0.0
Department of Health and Human Services	623,396.7	0.0	42,152.6	0.0	297,091.6	0.0	282,589.9	0.0	1,562.6
Department of Homeland Security	2.7	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	7,458.7	6,480.9	1.8	0.0	926.4	0.0	49.6	0.0	0.0
Department of Transportation	6,944.9	0.0	818.4	0.0	0.0	0.0	0.0	0.0	6,126.4
Environmental Protection Agency	9,228.3	8,972.6	231.3	0.0	24.4	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	7,504.3	600.8	2,736.4	0.0	4,167.2	0.0	0.0	0.0	0.0
National Science Foundation	76,602.9	0.0	5,257.5	0.0	69,366.0	0.0	1,979.4	0.0	0.0
Mississippi	505,111.8	257,876.8	62,255.3	0.0	177,206.9	0.0	992.4	0.0	6,780.4
Department of Agriculture	106,066.1	71,906.7	0.0	0.0	32,844.8	0.0	985.7	0.0	328.9
Department of Commerce	27,431.0	2,260.6	0.0	0.0	25,170.4	0.0	0.0	0.0	0.0
Department of Defense, research	18,448.1	7,246.9	642.4	0.0	10,558.9	0.0	0.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, total experimental development ^b	166,576.4	88,732.2	52,141.5	0.0	25,696.0	0.0	6.7	0.0	0.0
Department of Energy	5,867.7	320.0	0.0	0.0	5,547.7	0.0	0.0	0.0	0.0
Department of Health and Human Services	57,893.1	0.0	332.4	0.0	55,781.9	0.0	0.0	0.0	1,778.9
Department of Homeland Security	9.5	0.0	9.5	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	3,482.3	2,941.6	0.0	0.0	396.9	0.0	0.0	0.0	143.8
Department of Transportation	7,058.8	27.9	0.0	0.0	2,502.1	0.0	0.0	0.0	4,528.8
National Aeronautics and Space Administration	94,318.0	84,440.9	9,129.5	0.0	747.6	0.0	0.0	0.0	0.0
National Science Foundation	17,960.7	0.0	0.0	0.0	17,960.7	0.0	0.0	0.0	0.0
Missouri	2,375,132.7	141,860.0	1,496,564.5	0.0	694,830.8	0.0	36,738.7	0.0	5,138.7
Department of Agriculture	64,668.9	48,183.5	3.1	0.0	15,088.7	0.0	1,393.7	0.0	0.0
Department of Commerce	1,051.7	1,051.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Defense, research	47,868.9	3,181.5	27,140.9	0.0	15,518.4	0.0	2,028.0	0.0	0.0
Department of Defense, total experimental development ^b	982,092.2	58,099.6	920,484.5	0.0	3,469.3	0.0	38.7	0.0	0.0
Department of Energy	518,222.5	0.0	500,373.5	0.0	9,176.1	0.0	8,672.9	0.0	0.0
Department of Health and Human Services	635,947.0	0.0	16,067.6	0.0	600,337.9	0.0	19,049.9	0.0	491.6
Department of Homeland Security	3,735.7	3,735.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	5,597.5	5,175.4	0.0	0.0	126.4	0.0	0.0	0.0	295.8
Department of Transportation	12,128.0	0.0	3,836.1	0.0	3,940.6	0.0	0.0	0.0	4,351.3
Environmental Protection Agency	3,760.2	0.0	3,719.5	0.0	40.7	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	52,863.7	22,432.5	24,039.6	0.0	6,391.7	0.0	0.0	0.0	0.0
National Science Foundation	47,196.3	0.0	899.6	0.0	40,741.1	0.0	5,555.5	0.0	0.0
Montana	191,393.8	57,405.3	25,471.6	0.0	101,242.7	0.0	4,613.1	0.0	2,661.2
Department of Agriculture	30,284.4	15,896.7	125.8	0.0	11,457.9	0.0	2,804.0	0.0	0.0
Department of Commerce	404.5	0.0	0.0	0.0	404.5	0.0	0.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						State, local governments
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	
Department of Defense, research	15,617.1	0.0	2,884.6	0.0	12,532.4	0.0	200.0	0.0	0.0
Department of Defense, total experimental development ^b	8,303.1	492.7	3,333.9	0.0	4,476.6	0.0	0.0	0.0	0.0
Department of Energy	3,579.3	0.0	718.3	0.0	2,861.0	0.0	0.0	0.0	0.0
Department of Health and Human Services	83,499.3	33,771.9	13,829.7	0.0	33,805.9	0.0	1,545.1	0.0	546.6
Department of Homeland Security	997.2	0.0	0.0	0.0	997.2	0.0	0.0	0.0	0.0
Department of the Interior	8,963.1	7,244.0	0.0	0.0	1,374.1	0.0	40.0	0.0	305.0
Department of Transportation	3,269.7	0.0	0.0	0.0	1,460.1	0.0	0.0	0.0	1,809.6
National Aeronautics and Space Administration	8,485.4	0.0	3,379.5	0.0	5,081.9	0.0	24.0	0.0	0.0
National Science Foundation	27,990.7	0.0	1,199.7	0.0	26,791.0	0.0	0.0	0.0	0.0
Nebraska	243,708.3	33,689.4	12,340.7	0.0	174,619.2	0.0	19,495.7	0.0	3,563.3
Department of Agriculture	51,859.6	30,499.8	0.1	0.0	9,969.7	0.0	11,390.0	0.0	0.0
Department of Commerce	791.5	0.0	0.0	0.0	791.5	0.0	0.0	0.0	0.0
Department of Defense, research	6,173.1	919.1	1,414.0	0.0	3,398.4	0.0	441.6	0.0	0.0
Department of Defense, total experimental development ^b	8,980.4	1,583.3	6,609.7	0.0	787.5	0.0	0.0	0.0	0.0
Department of Energy	8,812.3	0.0	200.0	0.0	8,612.3	0.0	0.0	0.0	0.0
Department of Health and Human Services	127,122.7	0.0	3,128.5	0.0	116,010.3	0.0	7,664.1	0.0	319.8
Department of Homeland Security	0.8	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	736.6	555.6	0.0	0.0	181.0	0.0	0.0	0.0	0.0
Department of Transportation	6,217.7	0.0	0.0	0.0	2,974.3	0.0	0.0	0.0	3,243.4
National Aeronautics and Space Administration	693.8	131.6	112.8	0.0	449.4	0.0	0.0	0.0	0.0
National Science Foundation	32,319.9	0.0	875.0	0.0	31,444.9	0.0	0.0	0.0	0.0
Nevada	375,083.5	13,123.4	275,039.9	0.0	77,954.2	0.0	1,079.8	0.0	7,886.2
Department of Agriculture	7,370.4	2,723.9	0.9	0.0	4,645.6	0.0	0.0	0.0	0.0
Department of Commerce	486.2	0.0	0.0	0.0	486.2	0.0	0.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, research	8,223.7	981.3	3,122.7	0.0	4,119.6	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	141,202.5	2,768.3	137,376.8	0.0	1,057.3	0.0	0.0	0.0	0.0
Department of Energy	117,673.6	0.0	115,493.9	0.0	2,179.7	0.0	0.0	0.0	0.0
Department of Health and Human Services	42,861.3	0.0	1,816.4	0.0	37,876.6	0.0	1,079.8	0.0	2,088.5
Department of Homeland Security	318.9	318.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	11,691.3	5,573.1	0.0	0.0	1,685.5	0.0	0.0	0.0	4,432.7
Department of Transportation	2,856.9	0.0	1,456.8	0.0	1,400.1	0.0	0.0	0.0	0.0
Environmental Protection Agency	*	0.0	*	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	20,921.0	757.7	15,772.3	0.0	3,026.0	0.0	0.0	0.0	1,365.0
National Science Foundation	21,477.5	0.0	0.0	0.0	21,477.5	0.0	0.0	0.0	0.0
New Hampshire	669,304.6	20,849.8	474,116.1	0.0	164,238.4	0.0	8,892.9	0.0	1,207.4
Department of Agriculture	9,047.0	5,370.8	0.3	0.0	3,575.3	0.0	100.6	0.0	0.0
Department of Commerce	8,120.2	197.0	0.0	0.0	7,757.2	0.0	166.0	0.0	0.0
Department of Defense, research	19,317.9	389.7	11,326.5	0.0	7,601.8	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	428,844.5	8,469.7	419,812.0	0.0	481.4	0.0	81.3	0.0	0.0
Department of Energy	17,768.9	0.0	13,112.0	0.0	4,556.9	0.0	0.0	0.0	99.9
Department of Health and Human Services	119,409.2	0.0	18,866.5	0.0	92,172.7	0.0	8,039.7	0.0	330.3
Department of Homeland Security	6.5	0.0	6.5	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	3,570.9	287.3	2,188.1	0.0	1,001.4	0.0	0.0	0.0	94.1
Department of Transportation	776.5	0.0	86.4	0.0	0.0	0.0	6.9	0.0	683.2
Environmental Protection Agency	150.1	0.0	150.1	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	26,527.6	5,645.3	8,117.6	0.0	12,764.7	0.0	0.0	0.0	0.0
National Science Foundation	35,765.4	490.0	450.0	0.0	34,327.1	0.0	498.3	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
New Jersey	2,834,421.1	1,538,376.5	648,862.5	0.0	479,910.8	127,714.1	32,759.7	0.0	6,797.5
Department of Agriculture	11,268.5	94.1	3.3	0.0	11,146.1	0.0	0.0	0.0	25.0
Department of Commerce	33,255.6	20,346.0	0.0	0.0	12,909.6	0.0	0.0	0.0	0.0
Department of Defense, research	233,291.0	96,941.6	96,497.6	0.0	38,836.5	0.0	514.3	0.0	500.9
Department of Defense, total experimental development ^b	1,871,003.1	1,387,811.0	474,330.1	0.0	5,900.9	2,206.1	754.9	0.0	0.0
Department of Energy	162,048.3	1,800.7	7,931.6	0.0	26,808.1	125,508.0	0.0	0.0	0.0
Department of Health and Human Services	309,235.1	0.0	38,339.5	0.0	239,153.2	0.0	30,359.5	0.0	1,382.9
Department of Homeland Security	3,362.8	41.5	3,110.8	0.0	210.5	0.0	0.0	0.0	0.0
Department of the Interior	3,380.8	1,970.1	179.3	0.0	988.6	0.0	0.0	0.0	242.8
Department of Transportation	51,915.6	22,470.0	17,365.6	0.0	7,484.1	0.0	0.0	0.0	4,595.9
Environmental Protection Agency	3,461.4	2,011.1	1,303.9	0.0	146.3	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	25,121.5	4,786.9	6,938.7	0.0	13,344.5	0.0	51.3	0.0	0.0
National Science Foundation	127,077.4	103.5	2,862.1	0.0	122,982.3	0.0	1,079.6	0.0	50.0
New Mexico	3,755,707.3	738,100.0	569,770.2	2,268,755.8	151,185.2	0.0	22,253.3	0.0	5,642.8
Department of Agriculture	15,369.7	6,342.3	7.7	0.0	8,051.2	0.0	968.6	0.0	0.0
Department of Commerce	3,985.6	3,326.0	649.6	0.0	10.0	0.0	0.0	0.0	0.0
Department of Defense, research	301,288.0	173,469.8	79,682.1	30,016.4	15,052.1	0.0	2,740.2	0.0	327.4
Department of Defense, total experimental development ^b	1,203,929.0	517,738.5	437,003.5	239,148.8	9,006.4	0.0	963.3	0.0	68.4
Department of Energy	1,998,745.9	0.0	4,773.1	1,988,253.9	4,504.0	0.0	1,215.0	0.0	0.0
Department of Health and Human Services	96,042.9	0.0	3,694.1	1,611.8	73,304.2	0.0	14,608.7	0.0	2,824.0
Department of Homeland Security	36,897.1	20,297.9	11,788.9	4,810.3	0.0	0.0	0.0	0.0	0.0
Department of the Interior	6,408.3	3,596.3	0.0	0.0	1,741.0	0.0	0.0	0.0	1,071.0
Department of Transportation	4,840.4	0.0	3,405.5	0.0	132.9	0.0	0.0	0.0	1,302.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Environmental Protection Agency	630.5	0.0	142.7	0.0	487.8	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	48,953.5	13,329.3	27,420.3	4,914.6	3,289.3	0.0	0.0	0.0	0.0
National Science Foundation	38,616.5	0.0	1,202.7	0.0	35,606.4	0.0	1,757.4	0.0	50.0
New York	6,162,335.7	160,843.1	1,096,634.3	1,017,693.0	2,869,081.9	0.0	432,960.0	478,647.1	106,476.2
Department of Agriculture	66,969.3	26,542.6	70.5	0.0	38,264.6	0.0	2,091.7	0.0	0.0
Department of Commerce	10,472.3	191.8	411.4	0.0	9,823.4	0.0	45.7	0.0	0.0
Department of Defense, research	296,818.0	42,535.0	130,011.6	0.0	107,947.2	0.0	15,285.2	389.0	650.0
Department of Defense, total experimental development ^b	738,409.9	39,848.1	678,108.7	0.0	5,899.7	0.0	14,553.5	0.0	0.0
Department of Energy	1,629,011.2	4,403.4	72,690.8	1,017,693.0	67,933.0	0.0	1,148.9	465,142.1	0.0
Department of Health and Human Services	2,786,296.2	0.0	76,796.0	0.0	2,227,103.5	0.0	386,215.5	3,600.0	92,581.2
Department of Homeland Security	28,011.8	20,492.3	7,519.4	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	24,394.1	23,103.6	150.0	0.0	720.3	0.0	228.3	0.0	191.9
Department of Transportation	16,617.3	235.7	2,242.1	0.0	3,565.2	0.0	27.0	0.0	10,547.4
Environmental Protection Agency	3,701.7	0.0	1,576.3	0.0	2,125.4	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	160,069.4	3,436.5	111,443.3	0.0	34,646.7	0.0	947.7	9,516.1	79.1
National Science Foundation	401,564.5	54.0	15,614.2	0.0	371,053.1	0.0	12,416.6	0.0	2,426.6
North Carolina	2,417,439.8	317,219.1	357,888.5	0.0	1,540,021.5	0.0	185,759.1	0.0	16,551.6
Department of Agriculture	62,398.4	13,524.6	38.8	0.0	48,282.9	0.0	30.3	0.0	521.9
Department of Commerce	16,094.1	4,853.0	5,798.4	0.0	5,442.7	0.0	0.0	0.0	0.0
Department of Defense, research	96,660.5	3,817.5	17,869.2	0.0	54,567.6	0.0	20,406.1	0.0	0.0
Department of Defense, total experimental development ^b	151,574.6	13,978.6	131,439.9	0.0	5,616.4	0.0	100.0	0.0	439.7
Department of Energy	46,336.5	0.0	12,487.6	0.0	33,723.0	0.0	0.0	0.0	125.9
Department of Health and Human Services	1,743,122.5	177,645.2	165,319.6	0.0	1,232,028.7	0.0	163,951.5	0.0	4,177.6

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Homeland Security	6,072.3	447.0	5,625.3	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	9,323.0	6,410.6	76.3	0.0	2,212.5	0.0	0.0	0.0	623.6
Department of Transportation	17,559.8	0.0	0.0	0.0	6,746.8	0.0	150.0	0.0	10,663.0
Environmental Protection Agency	112,289.3	96,378.3	11,391.9	0.0	4,519.1	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	9,409.7	164.3	3,174.3	0.0	5,391.7	0.0	679.4	0.0	0.0
National Science Foundation	146,599.1	0.0	4,667.2	0.0	141,490.1	0.0	441.8	0.0	0.0
North Dakota	73,020.1	29,938.6	1,144.5	0.0	40,608.3	0.0	674.5	0.0	654.3
Department of Agriculture	39,377.7	28,814.4	0.0	0.0	10,543.4	0.0	0.0	0.0	20.0
Department of Defense, research	1,484.2	12.3	12.7	0.0	1,459.2	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	1,720.4	1,083.7	406.4	0.0	230.4	0.0	0.0	0.0	0.0
Department of Health and Human Services	19,625.5	0.0	0.0	0.0	18,728.8	0.0	674.5	0.0	222.2
Department of the Interior	75.9	27.9	0.0	0.0	48.0	0.0	0.0	0.0	0.0
Department of Transportation	3,528.6	0.0	224.9	0.0	2,998.5	0.0	0.0	0.0	305.1
Environmental Protection Agency	811.7	0.0	0.4	0.0	811.2	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	404.8	0.4	0.0	0.0	297.4	0.0	0.0	0.0	107.0
National Science Foundation	5,991.4	0.0	500.0	0.0	5,491.4	0.0	0.0	0.0	0.0
Ohio	5,188,238.0	2,288,898.1	1,741,143.7	0.0	874,282.5	0.0	255,612.5	0.0	28,301.2
Department of Agriculture	33,439.8	10,809.4	51.7	0.0	22,518.8	0.0	0.0	0.0	60.0
Department of Commerce	2,736.5	0.0	108.4	0.0	2,614.0	0.0	14.0	0.0	0.0
Department of Defense, research	754,338.9	421,697.5	211,699.7	0.0	96,381.4	0.0	24,560.3	0.0	0.0
Department of Defense, total experimental development ^b	3,032,802.9	1,645,365.0	1,364,950.7	0.0	10,331.6	0.0	12,155.6	0.0	0.0
Department of Energy	65,733.6	0.0	31,482.0	0.0	34,251.7	0.0	0.0	0.0	0.0
Department of Health and Human Services	873,454.0	19,317.0	19,058.5	0.0	602,515.9	0.0	215,188.4	0.0	17,374.2

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Homeland Security	1,067.9	200.0	867.9	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	5,484.7	4,456.3	6.5	0.0	300.3	0.0	588.6	0.0	133.0
Department of Transportation	36,189.7	22.1	23,949.0	0.0	1,195.3	0.0	289.3	0.0	10,734.0
Environmental Protection Agency	62,285.9	49,194.7	12,880.1	0.0	211.1	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	221,648.3	137,836.0	70,896.8	0.0	12,417.0	0.0	498.5	0.0	0.0
National Science Foundation	99,055.7	0.0	5,192.5	0.0	91,545.6	0.0	2,317.7	0.0	0.0
Oklahoma	505,865.6	215,412.4	59,289.8	0.0	200,204.9	0.0	26,934.2	0.0	4,024.4
Department of Agriculture	25,631.8	13,283.1	0.0	0.0	12,298.9	0.0	0.0	0.0	49.9
Department of Commerce	61,205.9	37,497.9	0.0	0.0	23,707.9	0.0	0.0	0.0	0.0
Department of Defense, research	19,967.8	894.4	6,673.4	0.0	12,399.9	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	134,678.9	93,332.8	40,524.3	0.0	821.8	0.0	0.0	0.0	0.0
Department of Energy	18,063.5	0.0	402.9	0.0	17,408.9	0.0	0.0	0.0	251.7
Department of Health and Human Services	106,910.1	0.0	1,859.5	0.0	77,895.5	0.0	25,796.1	0.0	1,359.1
Department of Homeland Security	5,610.0	0.0	5,610.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	55,459.2	53,705.7	271.4	0.0	1,391.0	0.0	0.0	0.0	91.1
Department of Transportation	16,009.8	10,195.1	2,161.3	0.0	1,380.8	0.0	0.0	0.0	2,272.6
Environmental Protection Agency	6,542.3	6,342.7	2.8	0.0	196.7	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	27,408.3	160.6	829.4	0.0	26,337.0	0.0	81.2	0.0	0.0
National Science Foundation	28,378.1	0.0	954.8	0.0	26,366.3	0.0	1,057.0	0.0	0.0
Oregon	696,901.8	71,695.4	129,331.5	0.0	466,607.5	0.0	20,525.0	0.0	8,742.4
Department of Agriculture	62,878.4	48,203.9	61.1	0.0	13,577.4	0.0	958.0	0.0	77.9
Department of Commerce	7,221.2	0.0	38.7	0.0	7,136.5	0.0	0.0	0.0	46.0
Department of Defense, research	47,620.4	400.1	37,761.5	0.0	9,458.8	0.0	0.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, total experimental development ^b	51,061.1	1,051.3	46,878.6	0.0	3,131.2	0.0	0.0	0.0	0.0
Department of Energy	24,964.2	5.4	9,644.8	0.0	15,267.0	0.0	0.0	0.0	46.9
Department of Health and Human Services	384,574.7	0.0	26,589.2	0.0	338,010.7	0.0	18,432.1	0.0	1,542.7
Department of the Interior	17,992.6	12,441.5	55.0	0.0	2,081.5	0.0	0.0	0.0	3,414.7
Department of Transportation	6,153.6	0.0	20.3	0.0	2,967.1	0.0	16.7	0.0	3,149.5
Environmental Protection Agency	14,582.4	9,591.4	357.9	0.0	4,633.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	11,582.0	1.7	4,737.1	0.0	6,843.2	0.0	0.0	0.0	0.0
National Science Foundation	68,271.1	0.0	3,187.3	0.0	63,501.0	0.0	1,118.2	0.0	464.7
Pennsylvania	4,092,542.5	380,776.6	714,711.8	459,365.0	2,128,287.0	35,178.0	365,667.8	0.0	8,556.3
Department of Agriculture	79,527.6	48,626.2	78.9	0.0	29,742.9	0.0	989.6	0.0	90.0
Department of Commerce	4,561.0	0.0	15.0	0.0	4,535.0	0.0	11.0	0.0	0.0
Department of Defense, research	213,346.9	11,531.7	29,679.5	0.0	159,288.3	10,890.0	1,957.4	0.0	0.0
Department of Defense, total experimental development ^b	943,783.1	286,497.7	496,560.4	0.0	134,588.5	24,038.0	2,098.5	0.0	0.0
Department of Energy	535,981.3	4,363.3	22,069.8	459,365.0	50,029.3	0.0	153.8	0.0	0.0
Department of Health and Human Services	1,923,654.9	22,387.8	89,795.7	0.0	1,456,667.9	0.0	354,274.3	0.0	529.2
Department of Homeland Security	5,620.5	0.0	4,776.1	0.0	594.4	250.0	0.0	0.0	0.0
Department of the Interior	4,010.4	3,282.7	187.0	0.0	323.4	0.0	0.0	0.0	217.4
Department of Transportation	26,215.5	29.7	6,202.8	0.0	11,399.1	0.0	864.2	0.0	7,719.8
Environmental Protection Agency	3,416.4	0.0	443.1	0.0	2,973.2	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	86,507.9	4,057.5	57,819.0	0.0	24,631.4	0.0	0.0	0.0	0.0
National Science Foundation	265,916.8	0.0	7,084.4	0.0	253,513.5	0.0	5,318.9	0.0	0.0
Rhode Island	722,584.7	270,394.8	139,358.9	0.0	213,156.5	0.0	93,923.8	0.0	5,750.6
Department of Agriculture	2,749.3	26.0	0.6	0.0	2,611.6	0.0	111.1	0.0	0.0
Department of Commerce	6,290.8	0.0	0.0	0.0	6,081.8	0.0	209.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, research	46,711.1	21,609.1	2,492.5	0.0	21,871.8	0.0	737.7	0.0	0.0
Department of Defense, total experimental development ^b	368,791.6	237,929.4	125,801.3	0.0	5,060.8	0.0	0.0	0.0	0.0
Department of Energy	7,309.4	0.0	4,187.4	0.0	2,846.9	0.0	275.0	0.0	0.0
Department of Health and Human Services	222,078.3	0.0	3,731.1	0.0	124,656.1	0.0	89,831.6	0.0	3,859.5
Department of Homeland Security	2.7	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	2,671.7	0.0	2,063.0	0.0	0.0	0.0	0.0	0.0	608.7
Department of Transportation	1,532.5	0.0	0.0	0.0	250.0	0.0	0.0	0.0	1,282.5
Environmental Protection Agency	10,885.9	10,829.0	0.0	0.0	56.9	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	3,197.0	1.2	839.3	0.0	2,260.9	0.0	95.5	0.0	0.0
National Science Foundation	50,364.4	0.0	241.0	0.0	47,459.7	0.0	2,663.7	0.0	0.0
South Carolina	645,951.1	94,934.0	179,107.1	34,681.1	262,199.9	0.0	67,308.7	0.0	7,720.3
Department of Agriculture	25,697.8	14,830.9	0.0	0.0	9,866.9	0.0	1,000.0	0.0	0.0
Department of Commerce	17,569.5	12,811.7	130.5	0.0	3,044.2	0.0	1,013.9	0.0	569.2
Department of Defense, research	29,238.2	10,342.4	3,486.1	729.0	7,934.0	0.0	6,746.7	0.0	0.0
Department of Defense, total experimental development ^b	268,589.6	54,136.0	151,687.7	5,625.4	554.7	0.0	56,585.7	0.0	0.0
Department of Energy	40,445.9	0.0	1,972.0	27,171.4	11,169.2	0.0	0.0	0.0	133.3
Department of Health and Human Services	207,579.9	0.0	13,742.5	0.0	188,429.9	0.0	1,872.2	0.0	3,535.3
Department of Homeland Security	6,230.3	327.6	4,737.0	1,155.3	10.5	0.0	0.0	0.0	0.0
Department of the Interior	3,941.8	2,484.5	580.3	0.0	509.4	0.0	0.0	0.0	367.6
Department of Transportation	5,587.6	0.0	2,255.7	0.0	217.0	0.0	0.0	0.0	3,114.9
Environmental Protection Agency	796.2	0.0	10.1	0.0	786.1	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	4,444.3	1.0	280.2	0.0	4,163.1	0.0	0.0	0.0	0.0
National Science Foundation	35,830.0	0.0	225.0	0.0	35,514.7	0.0	90.2	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
South Dakota	88,897.7	15,668.9	19,702.3	0.0	28,840.9	0.0	18,304.0	0.0	6,381.5
Department of Agriculture	10,622.3	2,878.0	0.0	0.0	7,723.1	0.0	0.0	0.0	21.2
Department of Defense, research	5,595.2	9.2	5,233.5	0.0	352.5	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	7,263.9	30.2	7,225.8	0.0	7.9	0.0	0.0	0.0	0.0
Department of Energy	2,902.3	0.0	1,396.2	0.0	306.1	0.0	0.0	0.0	1,200.0
Department of Health and Human Services	26,304.1	0.0	2,031.8	0.0	8,155.1	0.0	14,475.7	0.0	1,641.5
Department of Homeland Security	1,437.1	0.0	1,437.1	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	1,211.7	553.8	3.0	0.0	655.0	0.0	0.0	0.0	0.0
Department of Transportation	3,518.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3,518.8
National Aeronautics and Space Administration	14,757.8	12,197.8	2,149.8	0.0	410.2	0.0	0.0	0.0	0.0
National Science Foundation	15,284.5	0.0	225.0	0.0	11,231.2	0.0	3,828.4	0.0	0.0
Tennessee	3,578,413.6	1,002,594.3	740,069.1	1,600.1	317,158.5	0.0	445,344.6	1,066,175.1	5,471.9
Department of Agriculture	33,807.1	14,770.9	1.5	0.0	18,626.3	0.0	1.8	0.0	406.6
Department of Commerce	157.2	0.0	49.2	0.0	75.0	0.0	0.0	0.0	33.0
Department of Defense, research	67,025.6	22,974.5	2,997.4	0.0	23,386.2	0.0	11,196.6	6,470.9	0.0
Department of Defense, total experimental development ^b	550,727.9	204,936.7	339,491.9	0.0	2,346.2	0.0	475.3	3,477.8	0.0
Department of Energy	1,545,496.5	85,485.0	326,345.8	1,600.1	32,621.9	0.0	46,070.0	1,053,373.7	0.0
Department of Health and Human Services	572,730.3	171.0	12,720.9	0.0	173,342.5	0.0	385,482.2	340.8	673.0
Department of Homeland Security	4,789.0	0.0	860.0	0.0	2,016.1	0.0	0.0	1,912.9	0.0
Department of the Interior	7,330.0	6,303.5	0.0	0.0	778.7	0.0	0.0	99.0	148.8
Department of Transportation	8,828.3	2,800.0	945.3	0.0	372.5	0.0	0.0	500.0	4,210.5
Environmental Protection Agency	25,429.4	0.0	22,642.5	0.0	2,786.8	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	701,788.1	664,449.0	31,834.0	0.0	5,505.1	0.0	0.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
National Science Foundation	60,304.3	703.7	2,180.7	0.0	55,301.2	0.0	2,118.7	0.0	0.0
Texas	5,067,493.3	888,777.4	2,159,499.9	0.0	1,863,276.3	0.0	148,302.5	4,737.6	2,899.5
Department of Agriculture	94,685.8	40,252.6	54.9	0.0	49,310.4	0.0	5,067.9	0.0	0.0
Department of Commerce	8,003.9	0.0	741.5	0.0	7,236.6	0.0	0.0	0.0	25.9
Department of Defense, research	183,625.4	13,446.2	52,944.4	0.0	108,139.0	0.0	9,085.3	10.6	0.0
Department of Defense, total experimental development ^b	1,679,548.5	68,644.0	1,548,753.8	0.0	48,561.3	0.0	9,575.2	4,014.1	0.1
Department of Energy	78,331.3	0.0	22,969.5	0.0	51,701.8	0.0	3,412.1	0.0	248.0
Department of Health and Human Services	1,322,533.3	0.0	41,692.2	0.0	1,228,027.2	0.0	51,442.1	0.0	1,371.8
Department of Homeland Security	17,446.9	0.0	13,061.0	0.0	4,385.9	0.0	0.0	0.0	0.0
Department of the Interior	9,765.8	5,305.1	3,198.1	0.0	1,070.8	0.0	168.0	0.0	23.8
Department of Transportation	9,857.3	100.0	2,185.5	0.0	6,758.3	0.0	0.0	713.0	100.5
Environmental Protection Agency	4,862.6	0.0	2,402.8	0.0	2,459.8	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	1,336,483.8	761,029.6	461,415.6	0.0	48,819.4	0.0	65,188.7	0.0	30.6
National Science Foundation	322,348.5	0.0	10,080.6	0.0	306,805.8	0.0	4,363.3	0.0	1,098.8
Utah	1,301,136.4	172,150.0	600,103.8	0.0	519,871.4	0.0	2,970.9	0.0	6,040.4
Department of Agriculture	31,231.1	24,590.5	0.0	0.0	6,640.6	0.0	0.0	0.0	0.0
Department of Commerce	440.4	0.0	0.0	0.0	440.4	0.0	0.0	0.0	0.0
Department of Defense, research	25,629.2	1,699.5	2,418.8	0.0	21,081.0	0.0	429.9	0.0	0.0
Department of Defense, total experimental development ^b	453,009.1	143,863.3	284,310.8	0.0	24,236.2	0.0	598.8	0.0	0.0
Department of Energy	208,409.5	64.8	10,891.3	0.0	197,453.3	0.0	0.0	0.0	0.0
Department of Health and Human Services	224,372.8	0.0	14,622.0	0.0	207,497.7	0.0	1,942.2	0.0	311.0
Department of Homeland Security	586.8	0.0	0.0	0.0	586.8	0.0	0.0	0.0	0.0
Department of the Interior	4,650.0	1,915.5	0.0	0.0	271.0	0.0	0.0	0.0	2,463.6
Department of Transportation	3,481.1	15.4	50.0	0.0	150.0	0.0	0.0	0.0	3,265.8

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Environmental Protection Agency	449.9	0.0	449.9	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	297,976.1	1.1	284,761.6	0.0	13,213.4	0.0	0.0	0.0	0.0
National Science Foundation	50,900.4	0.0	2,599.4	0.0	48,301.0	0.0	0.0	0.0	0.0
Vermont	119,948.0	8,264.9	30,866.8	0.0	77,544.0	0.0	250.0	0.0	3,022.4
Department of Agriculture	16,168.8	3,056.4	0.0	0.0	13,112.5	0.0	0.0	0.0	0.0
Department of Commerce	1,239.7	0.0	0.0	0.0	1,239.7	0.0	0.0	0.0	0.0
Department of Defense, research	1,134.8	0.0	672.9	0.0	461.8	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	25,520.3	819.3	24,687.8	0.0	13.1	0.0	0.0	0.0	0.0
Department of Energy	4,415.3	0.0	2,039.6	0.0	2,375.7	0.0	0.0	0.0	0.0
Department of Health and Human Services	59,259.4	0.0	2,178.5	0.0	55,119.1	0.0	0.0	0.0	1,961.8
Department of Homeland Security	1,048.2	391.7	656.5	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	4,426.0	3,997.5	0.0	0.0	250.0	0.0	0.0	0.0	178.5
Department of Transportation	972.1	0.0	0.0	0.0	90.0	0.0	0.0	0.0	882.1
National Aeronautics and Space Administration	676.5	0.1	631.4	0.0	45.0	0.0	0.0	0.0	0.0
National Science Foundation	5,087.0	0.0	0.0	0.0	4,837.0	0.0	250.0	0.0	0.0
Virginia	8,028,901.8	2,250,870.4	4,501,403.8	0.0	601,130.0	131,515.1	121,443.3	408,772.9	13,766.3
Department of Agriculture	26,390.2	1,555.6	2,892.0	0.0	17,712.5	0.0	4,230.1	0.0	0.0
Department of Commerce	8,440.8	256.0	1,182.4	0.0	6,552.4	0.0	0.0	450.0	0.0
Department of Defense, research	926,078.8	213,881.4	584,531.7	0.0	84,535.2	0.0	11,821.4	31,309.2	0.0
Department of Defense, total experimental development ^b	5,116,616.0	1,698,128.1	3,106,123.7	0.0	24,536.6	0.0	30,795.0	257,007.0	25.6
Department of Energy	225,616.5	9,122.3	58,716.5	0.0	25,053.3	131,515.1	1,209.3	0.0	0.0
Department of Health and Human Services	505,375.2	689.6	153,971.8	0.0	299,622.4	0.0	33,071.6	12,837.6	5,182.3
Department of Homeland Security	170,212.4	9,103.9	133,711.0	0.0	4,253.0	0.0	0.0	23,144.6	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of the Interior	93,025.8	91,317.5	843.3	0.0	509.9	0.0	0.0	0.0	355.1
Department of Transportation	236,250.5	7,600.9	111,419.3	0.0	14,122.5	0.0	15,619.9	79,284.6	8,203.3
Environmental Protection Agency	27,426.6	0.0	27,190.8	0.0	235.8	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	566,367.2	219,058.7	317,036.3	0.0	14,091.7	0.0	16,180.6	0.0	0.0
National Science Foundation	127,101.8	156.5	3,785.0	0.0	109,904.8	0.0	8,515.5	4,740.0	0.0
Washington	3,195,255.2	357,337.4	1,029,251.1	0.0	841,535.2	0.0	536,123.9	407,666.9	23,340.7
Department of Agriculture	58,065.9	34,427.0	90.7	0.0	23,238.4	0.0	262.8	0.0	47.1
Department of Commerce	71,544.0	52,110.1	0.0	0.0	19,024.9	0.0	25.0	296.8	87.1
Department of Defense, research	101,763.3	4,986.2	14,549.8	0.0	54,104.4	0.0	5,541.9	22,580.9	0.0
Department of Defense, total experimental development ^b	1,116,842.0	231,040.9	873,101.8	0.0	7,107.5	0.0	292.1	5,299.7	0.0
Department of Energy	441,158.5	5,187.8	40,071.2	0.0	32,272.5	0.0	2,507.3	359,645.4	1,474.3
Department of Health and Human Services	1,155,393.7	5,041.7	37,883.8	0.0	558,515.0	0.0	522,205.2	15,459.5	16,288.6
Department of Homeland Security	3,355.3	0.0	19.9	0.0	0.0	0.0	0.0	3,335.5	0.0
Department of the Interior	25,786.9	19,658.4	0.0	0.0	5,761.9	0.0	41.7	0.0	324.9
Department of Transportation	11,617.8	0.0	214.4	0.0	5,829.2	0.0	0.0	1,049.2	4,525.0
Environmental Protection Agency	3,739.9	0.0	151.7	0.0	3,588.3	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	77,732.9	4,635.4	54,629.4	0.0	16,148.5	0.0	2,319.7	0.0	0.0
National Science Foundation	128,255.0	250.0	8,538.4	0.0	115,944.6	0.0	2,928.2	0.0	593.9
West Virginia	141,895.2	46,898.7	24,609.3	0.0	50,315.0	0.0	12,410.3	0.0	7,662.0
Department of Agriculture	31,423.9	21,942.9	1.5	0.0	9,440.1	0.0	0.0	0.0	39.5
Department of Commerce	167.6	0.0	0.0	0.0	167.6	0.0	0.0	0.0	0.0
Department of Defense, research	2,884.8	52.2	97.3	0.0	2,532.6	0.0	202.7	0.0	0.0
Department of Defense, total experimental development ^b	2,984.4	75.9	2,017.0	0.0	641.5	0.0	250.0	0.0	0.0
Department of Energy	25,161.5	280.0	18,516.8	0.0	2,459.4	0.0	3,842.3	0.0	62.9

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Health and Human Services	61,631.8	24,056.8	2,365.7	0.0	32,712.0	0.0	0.0	0.0	2,497.3
Department of Homeland Security	679.1	0.0	679.1	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Interior	369.3	260.2	0.0	0.0	0.0	0.0	0.0	0.0	109.1
Department of Transportation	1,641.4	0.0	641.9	0.0	206.9	0.0	1.0	0.0	791.5
National Aeronautics and Space Administration	2,158.7	230.7	290.0	0.0	1,638.0	0.0	0.0	0.0	0.0
National Science Foundation	12,792.7	0.0	0.0	0.0	516.8	0.0	8,114.2	0.0	4,161.6
Wisconsin	839,542.6	54,827.2	96,258.0	0.0	644,517.1	0.0	39,519.7	0.0	4,420.6
Department of Agriculture	71,513.8	41,353.6	13.1	0.0	29,534.4	0.0	581.9	0.0	30.8
Department of Commerce	4,476.1	0.0	392.6	0.0	4,083.5	0.0	0.0	0.0	0.0
Department of Defense, research	31,006.7	250.0	10,909.6	0.0	19,838.6	0.0	8.5	0.0	0.0
Department of Defense, total experimental development ^b	55,779.4	2.1	55,259.6	0.0	516.0	0.0	1.7	0.0	0.0
Department of Energy	66,657.7	0.0	8,356.2	0.0	58,301.6	0.0	0.0	0.0	0.0
Department of Health and Human Services	473,342.2	0.0	14,991.1	0.0	419,287.4	0.0	38,766.5	0.0	297.1
Department of Homeland Security	348.8	0.0	0.0	0.0	348.8	0.0	0.0	0.0	0.0
Department of the Interior	15,137.5	13,074.7	0.0	0.0	1,712.4	0.0	0.0	0.0	350.4
Department of Transportation	5,234.9	0.0	960.0	0.0	532.5	0.0	0.0	0.0	3,742.4
Environmental Protection Agency	33.3	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	14,151.9	146.8	1,547.4	0.0	12,457.7	0.0	0.0	0.0	0.0
National Science Foundation	101,860.2	0.0	3,828.3	0.0	97,870.9	0.0	161.0	0.0	0.0
Wyoming	67,645.9	24,654.8	6,178.2	0.0	33,551.1	0.0	150.0	0.0	3,111.8
Department of Agriculture	3,031.6	66.1	0.0	0.0	2,815.5	0.0	150.0	0.0	0.0
Department of Commerce	864.7	0.0	0.0	0.0	864.7	0.0	0.0	0.0	0.0
Department of Defense, research	893.5	0.0	1.1	0.0	892.5	0.0	0.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, total experimental development ^b	2,173.3	11.7	2,112.7	0.0	48.8	0.0	0.0	0.0	0.0
Department of Energy	2,876.9	0.0	1,326.9	0.0	1,550.0	0.0	0.0	0.0	0.0
Department of Health and Human Services	11,429.4	0.0	740.0	0.0	10,526.7	0.0	0.0	0.0	162.6
Department of the Interior	25,994.0	24,577.0	0.0	0.0	145.1	0.0	0.0	0.0	1,272.0
Department of Transportation	1,798.8	0.0	121.6	0.0	0.0	0.0	0.0	0.0	1,677.2
National Aeronautics and Space Administration	1,282.4	0.0	875.0	0.0	407.4	0.0	0.0	0.0	0.0
National Science Foundation	17,301.4	0.0	1,000.9	0.0	16,300.4	0.0	0.0	0.0	0.0
Outlying areas	520,697.2	376,479.9	5,705.9	0.0	82,136.2	0.0	1,425.7	0.0	54,949.6
Department of Agriculture	16,566.7	4,854.8	0.0	0.0	11,711.9	0.0	0.0	0.0	0.0
Department of Commerce	1,963.8	0.0	0.0	0.0	1,963.8	0.0	0.0	0.0	0.0
Department of Defense, research	1,657.8	204.0	5.0	0.0	1,448.8	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	368,819.9	368,723.8	73.2	0.0	22.9	0.0	0.0	0.0	0.0
Department of Energy	1,936.6	123.5	1,813.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Health and Human Services	103,814.2	2,086.1	373.1	0.0	50,344.2	0.0	1,061.1	0.0	49,949.6
Department of the Interior	5,404.1	404.1	0.0	0.0	0.0	0.0	0.0	0.0	5,000.0
Department of Transportation	1,719.1	83.5	1,598.6	0.0	37.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	565.0	0.0	0.0	0.0	565.0	0.0	0.0	0.0	0.0
National Science Foundation	18,250.1	0.0	1,843.0	0.0	16,042.5	0.0	364.6	0.0	0.0
Puerto Rico	81,769.7	5,601.3	2,288.4	0.0	70,994.3	0.0	520.5	0.0	2,365.2
Department of Agriculture	9,794.0	4,854.8	0.0	0.0	4,939.2	0.0	0.0	0.0	0.0
Department of Commerce	1,547.5	0.0	0.0	0.0	1,547.5	0.0	0.0	0.0	0.0
Department of Defense, research	1,657.8	204.0	5.0	0.0	1,448.8	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	105.1	14.9	67.2	0.0	22.9	0.0	0.0	0.0	0.0
Department of Energy	123.5	123.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 92

Federal obligations for research and experimental development, by state or location, selected agency, and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						State, local governments
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	
Department of Health and Human Services	51,190.8	0.0	373.1	0.0	48,296.6	0.0	155.9	0.0	2,365.2
Department of the Interior	404.1	404.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	565.0	0.0	0.0	0.0	565.0	0.0	0.0	0.0	0.0
National Science Foundation	16,381.8	0.0	1,843.0	0.0	14,174.2	0.0	364.6	0.0	0.0
Other areas ^c	438,927.5	370,878.6	3,417.5	0.0	11,141.9	0.0	905.2	0.0	52,584.4
Department of Agriculture	6,772.7	0.0	0.0	0.0	6,772.7	0.0	0.0	0.0	0.0
Department of Commerce	416.3	0.0	0.0	0.0	416.3	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	368,714.9	368,708.9	5.9	0.0	0.0	0.0	0.0	0.0	0.0
Department of Energy	1,813.0	0.0	1,813.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Health and Human Services	52,623.4	2,086.1	0.0	0.0	2,047.7	0.0	905.2	0.0	47,584.4
Department of the Interior	5,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,000.0
Department of Transportation	1,719.1	83.5	1,598.6	0.0	37.0	0.0	0.0	0.0	0.0
National Science Foundation	1,868.3	0.0	0.0	0.0	1,868.3	0.0	0.0	0.0	0.0
Offices abroad ^d	4,335.6	620.8	3,304.1	0.0	344.0	0.0	0.6	0.0	66.2
Department of Agriculture	373.2	319.7	52.8	0.0	0.1	0.0	0.6	0.0	0.0
Department of Commerce	66.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.2
Department of Defense, total experimental development ^b	3,736.3	141.1	3,251.3	0.0	343.9	0.0	0.0	0.0	0.0
National Science Foundation	160.0	160.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Undistributed ^e	3,073,110.3	1,325,952.1	1,663,866.4	0.0	60,414.2	0.0	22,877.5	0.0	0.0
Department of Defense, research	881,859.1	549,761.6	331,274.2	0.0	823.3	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	1,455,073.2	776,190.5	677,407.3	0.0	1,475.4	0.0	0.0	0.0	0.0
Department of Health and Human Services	736,178.0	0.0	655,184.9	0.0	58,115.6	0.0	22,877.5	0.0	0.0

* = amount greater than \$0 but less than \$50.

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.

^b Department of Defense (DOD) development obligations have been reported in two categories, advanced technology and major systems, since volume 44 (FYs 1994–96). As of volume 66 (FYs 2016–17), the definition of major systems development was changed to represent DOD Budget Activities 4 through 6 instead of Budget Activities 4 through 7.

^c Includes American Samoa, Baker Island, Guam, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Islands, Navassa Island, Northern Mariana Islands, Palmyra Atoll, U.S. Virgin Islands, and Wake Island.

^d Includes R&D performed or administered in foreign countries by the U.S. government.

^e Undistributed totals include DOD obligations for which the location of performance is not reported, and HHS obligations for which the location of performance could not be reported.

Note(s):

Because of rounding, detail may not add to total. Eleven agencies are required to report data for this section of the survey: the Departments of Agriculture, Commerce, Defense, Energy, Health and Human Services, Homeland Security, the Interior, and Transportation; the Environmental Protection Agency; the National Aeronautics and Space Administration; and the National Science Foundation. Obligations of these 11 agencies represented more than 97% of total federal R&D obligations in FY 2019. Geographic distribution of DOD development funding to industry reflects location of prime contractors and not the numerous subcontractors who perform much of the R&D. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

Federal obligations for R&D plant, by state or location and selected agency: FY 2019

State or location	Total	DHS	DOC	DOD	DOE	DOI	DOT	EPA	HHS	NASA	NSF	USDA
All locations	4,329,453.9	1,306.0	464,332.3	609,655.9	2,245,499.5	4,646.5	39,261.0	4,695.0	243,000.0	35,925.4	652,140.0	28,992.4
Alabama	125,340.2	0.0	0.0	122,721.8	0.0	0.0	529.4	0.0	0.0	0.0	2,089.0	0.0
Alaska	6,648.3	0.0	6,287.0	54.9	0.0	0.0	0.0	0.0	0.0	0.0	306.4	0.0
Arizona	12,537.1	0.0	0.0	262.3	0.0	0.0	8.8	0.0	5,045.7	0.0	6,445.1	775.2
Arkansas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
California	676,511.6	0.0	4,062.0	67,315.7	544,473.1	0.0	1,023.7	0.0	0.0	15,377.1	38,278.0	5,982.0
Colorado	365,052.1	0.0	17,195.1	34,880.0	305,460.0	0.0	1,679.6	0.0	0.0	0.0	4,115.1	1,722.2
Connecticut	1,481.4	1,306.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	175.4	0.0
Delaware	9,559.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9,559.9	0.0
District of Columbia	150,500.7	0.0	0.0	37,780.9	23,000.0	0.0	4,937.4	913.6	0.0	0.0	83,755.3	113.5
Florida	33,775.9	0.0	14,211.0	4,742.5	0.0	0.0	5.0	165.6	0.0	8,026.6	5,254.8	1,370.5
Georgia	6,592.6	0.0	0.0	0.0	0.0	0.0	0.0	112.3	0.0	0.0	2,681.6	3,798.6
Hawaii	24,289.5	0.0	4,276.0	7,437.1	0.0	0.0	0.0	0.0	6,478.2	0.0	6,098.2	0.0
Idaho	3,395.0	0.0	0.0	2,590.0	400.0	0.0	0.0	0.0	0.0	0.0	405.0	0.0
Illinois	471,335.8	0.0	0.0	16,141.5	444,871.6	0.0	104.3	0.0	3,269.5	0.0	6,949.0	0.0
Indiana	8,852.3	0.0	0.0	2,550.0	0.0	0.0	0.0	0.0	0.0	0.0	6,302.3	0.0
Iowa	2,081.8	0.0	0.0	0.0	1,000.0	0.0	32.9	0.0	0.0	0.0	688.8	360.1
Kansas	12,199.5	0.0	0.0	11,196.4	0.0	0.0	2.5	0.0	0.0	0.0	1,000.6	0.0
Kentucky	6,823.4	0.0	0.0	0.0	0.0	0.0	120.9	0.0	6,000.0	0.0	702.5	0.0
Louisiana	25,859.4	0.0	0.0	18,660.7	0.0	0.0	0.0	0.0	1,803.0	3,663.0	1,732.7	0.0
Maine	350.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	350.0	0.0
Maryland	648,412.2	0.0	316,759.4	48,985.0	0.0	0.0	562.3	0.0	173,532.3	77.7	108,002.2	493.2
Massachusetts	39,754.5	0.0	0.0	19,765.0	0.0	0.0	950.0	0.0	0.0	0.0	19,039.6	0.0
Michigan	84,619.7	0.0	0.0	498.3	75,000.0	0.0	0.0	0.0	0.0	0.0	9,121.3	0.0
Minnesota	2,992.0	0.0	0.0	56.5	0.0	0.0	0.0	171.5	0.0	0.0	2,764.0	0.0
Mississippi	13,552.4	0.0	13,221.0	198.5	0.0	0.0	0.0	0.0	0.0	0.0	132.9	0.0
Missouri	11,126.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7,972.4	0.0	3,153.9	0.0
Montana	19.1	0.0	0.0	0.0	0.0	0.0	19.1	0.0	0.0	0.0	0.0	0.0
Nebraska	841.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	841.6	0.0
Nevada	977.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	977.4	0.0
New Hampshire	1,274.3	0.0	0.0	0.0	0.0	0.0	14.8	0.0	0.0	0.0	1,259.6	0.0
New Jersey	80,847.5	0.0	35,727.2	6,078.4	11,526.0	3,354.0	20,613.3	38.4	0.0	16.9	3,493.2	0.0
New Mexico	256,783.6	0.0										

TABLE 93

Federal obligations for R&D plant, by state or location and selected agency: FY 2019

(Dollars in thousands)

State or location	Total	DHS	DOC	DOD	DOE	DOI	DOT	EPA	HHS	NASA	NSF	USDA
Ohio	94,547.0	0.0	0.0	345.2	0.0	0.0	0.0	940.2	0.0	0.0	93,261.7	0.0
Oklahoma	10,806.3	0.0	822.5	0.0	0.0	0.0	1,255.9	121.2	8,000.0	0.0	606.7	0.0
Oregon	144,397.7	0.0	22,640.0	0.0	0.0	0.0	0.0	183.3	11,000.0	0.0	109,625.8	948.6
Pennsylvania	12,322.0	0.0	0.0	7,544.1	0.0	0.0	98.6	0.0	0.0	0.0	2,612.4	2,066.8
Rhode Island	27,672.4	0.0	10,495.0	14,355.8	0.0	0.0	0.0	207.0	0.0	2.2	2,612.4	0.0
South Carolina	21,817.2	0.0	14,170.0	750.0	0.0	0.0	541.5	0.0	0.0	0.0	6,267.8	87.9
South Dakota	255.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	255.0	0.0
Tennessee	513,096.1	0.0	691.3	10,300.7	499,174.5	0.0	0.0	0.0	0.0	155.6	2,774.0	0.0
Texas	64,524.8	0.0	0.0	562.2	0.0	0.0	802.3	0.0	0.0	8,606.3	49,661.8	4,892.1
Utah	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vermont	847.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	847.1	0.0
Virginia	103,838.9	0.0	0.0	83,699.6	7,578.9	142.5	5,447.1	0.0	0.0	0.0	6,970.9	0.0
Washington	55,932.3	0.0	3,774.8	0.0	50,668.2	0.0	0.0	0.0	0.0	0.0	1,489.3	0.0
West Virginia	770.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	770.0	0.0
Wisconsin	12,532.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,999.5	0.0	8,446.3	1,086.6
Wyoming	10,557.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10,557.3	0.0
Outlying areas	18,331.1	0.0	0.0	2,438.6	0.0	0.0	435.1	0.0	12,899.3	0.0	17.8	2,540.3
Puerto Rico	15,457.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12,899.3	0.0	17.8	2,540.3
Other areas ^a	2,873.7	0.0	0.0	2,438.6	0.0	0.0	435.1	0.0	0.0	0.0	0.0	0.0
Offices abroad ^b	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

DHS = Department of Homeland Security; DOC = Department of Commerce; DOD = Department of Defense; DOE = Department of Energy; DOI = Department of the Interior; DOT = Department of Transportation; EPA = Environmental Protection Agency; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NSF = National Science Foundation; USDA = Department of Agriculture.

^a Includes American Samoa, Baker Island, Guam, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Islands, Navassa Island, Northern Mariana Islands, Palmyra Atoll, U.S. Virgin Islands, and Wake Island.

^b Includes federal obligations for R&D plant located in foreign countries.

Note(s):

Because of rounding, detail may not add to total. Eleven agencies are required to report data for this section of the survey: DHS, DOC, DOD, DOE, DOI, DOT, EPA, HHS, NASA, NSF, and USDA. Obligations of these 11 agencies represented more than 98% of total federal R&D plant obligations in FY 2019. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Alabama									
Department of Defense, RDT&E	3,795,256.8	1,449,159.3	2,305,836.7	0.0	34,027.1	0.0	6,233.7	0.0	0.0
Department of Defense, research	122,349.2	23,463.9	84,465.2	0.0	14,252.4	0.0	167.7	0.0	0.0
Department of Defense, total experimental development ^b	3,430,071.2	1,298,479.3	2,105,786.9	0.0	19,765.4	0.0	6,039.6	0.0	0.0
Department of Defense, operational systems development ^c	242,836.4	127,216.1	115,584.7	0.0	9.3	0.0	26.3	0.0	0.0
Alaska									
Department of Defense, RDT&E	133,805.0	37,528.7	68,507.6	0.0	8,859.6	0.0	1,500.0	0.0	17,409.1
Department of Defense, research	10,732.4	0.0	1,437.7	0.0	7,794.7	0.0	1,500.0	0.0	0.0
Department of Defense, total experimental development ^b	113,451.3	37,042.0	58,086.4	0.0	913.7	0.0	0.0	0.0	17,409.1
Department of Defense, operational systems development ^c	9,621.3	486.7	8,983.4	0.0	151.2	0.0	0.0	0.0	0.0
Arizona									
Department of Defense, RDT&E	1,835,454.6	126,834.8	1,652,356.0	0.0	47,832.8	0.0	300.1	0.0	8,130.9
Department of Defense, research	96,456.8	3,789.4	48,573.4	0.0	43,793.9	0.0	300.1	0.0	0.0
Department of Defense, total experimental development ^b	1,319,589.0	80,869.9	1,226,623.1	0.0	3,965.1	0.0	0.0	0.0	8,130.9
Department of Defense, operational systems development ^c	419,408.8	42,175.6	377,159.5	0.0	73.7	0.0	0.0	0.0	0.0
Arkansas									
Department of Defense, RDT&E	53,272.5	943.0	45,796.3	0.0	6,533.1	0.0	0.0	0.0	0.0
Department of Defense, research	8,357.1	82.7	1,858.5	0.0	6,415.9	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	44,463.7	423.1	43,937.9	0.0	102.8	0.0	0.0	0.0	0.0

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						State, local governments
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	
Department of Defense, operational systems development ^c	451.7	437.3	0.0	0.0	14.4	0.0	0.0	0.0	0.0
California									
Department of Defense, RDT&E	9,024,648.8	2,800,498.1	5,269,790.9	93,038.4	425,579.1	15,093.8	91,445.7	327,196.2	2,006.6
Department of Defense, research	974,825.5	157,215.7	321,942.6	27,153.4	379,513.1	13,764.6	70,043.2	5,014.0	178.9
Department of Defense, total experimental development ^b	6,513,212.4	2,115,755.2	4,005,319.3	62,969.0	42,439.2	1,329.3	21,257.5	262,315.2	1,827.7
Department of Defense, operational systems development ^c	1,536,611.0	527,527.2	942,529.0	2,916.0	3,626.8	0.0	145.0	59,867.0	0.0
Colorado									
Department of Defense, RDT&E	2,680,132.3	81,255.8	2,540,511.6	0.0	50,114.2	0.0	4,702.5	3,548.3	0.0
Department of Defense, research	80,648.3	10,271.8	25,054.7	0.0	44,735.2	0.0	202.4	384.1	0.0
Department of Defense, total experimental development ^b	1,965,977.5	68,478.1	1,884,624.0	0.0	5,213.4	0.0	4,500.0	3,162.0	0.0
Department of Defense, operational systems development ^c	633,506.5	2,505.9	630,833.0	0.0	165.5	0.0	0.0	2.2	0.0
Connecticut									
Department of Defense, RDT&E	1,969,505.5	3,806.3	1,945,060.8	0.0	15,911.3	0.0	4,727.2	0.0	0.0
Department of Defense, research	43,141.8	0.0	24,093.0	0.0	14,321.7	0.0	4,727.2	0.0	0.0
Department of Defense, total experimental development ^b	1,759,402.3	3,806.3	1,754,006.4	0.0	1,589.6	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	166,961.4	0.0	166,961.4	0.0	0.0	0.0	0.0	0.0	0.0
Delaware									
Department of Defense, RDT&E	25,990.2	868.4	7,406.0	0.0	17,715.8	0.0	0.0	0.0	0.0
Department of Defense, research	19,048.8	23.4	2,184.5	0.0	16,840.9	0.0	0.0	0.0	0.0

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, total experimental development ^b	6,897.8	845.0	5,199.8	0.0	853.0	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	43.6	0.0	21.7	0.0	21.9	0.0	0.0	0.0	0.0
District of Columbia									
Department of Defense, RDT&E	4,510,478.5	3,729,194.3	579,814.2	0.0	33,043.3	0.0	165,938.5	2,482.9	5.2
Department of Defense, research	460,249.2	395,036.2	20,496.6	0.0	19,989.0	0.0	22,244.5	2,482.9	0.0
Department of Defense, total experimental development ^b	3,161,464.1	2,549,120.2	458,491.2	0.0	12,956.8	0.0	140,890.7	0.0	5.2
Department of Defense, operational systems development ^c	888,765.2	785,037.9	100,826.5	0.0	97.6	0.0	2,803.3	0.0	0.0
Florida									
Department of Defense, RDT&E	2,733,975.6	971,598.0	1,675,894.8	0.0	67,582.0	0.0	18,900.8	0.0	0.0
Department of Defense, research	236,892.1	95,812.2	69,774.9	0.0	61,338.9	0.0	9,966.1	0.0	0.0
Department of Defense, total experimental development ^b	2,138,937.7	796,427.0	1,329,846.7	0.0	6,114.4	0.0	6,549.6	0.0	0.0
Department of Defense, operational systems development ^c	358,145.7	79,358.8	276,273.3	0.0	128.6	0.0	2,385.0	0.0	0.0
Georgia									
Department of Defense, RDT&E	832,259.3	361,721.6	261,222.5	0.0	190,021.7	0.0	19,293.5	0.0	0.0
Department of Defense, research	105,211.0	3,376.2	18,236.3	0.0	80,948.4	0.0	2,650.1	0.0	0.0
Department of Defense, total experimental development ^b	399,508.4	161,864.2	126,223.0	0.0	98,844.8	0.0	12,576.4	0.0	0.0
Department of Defense, operational systems development ^c	327,539.9	196,481.2	116,763.1	0.0	10,228.6	0.0	4,067.0	0.0	0.0
Hawaii									
Department of Defense, RDT&E	256,595.1	150,058.2	84,111.1	0.0	14,224.5	0.0	8,193.4	0.0	7.9

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, RDT&E	222,044.0	3,956.7	208,757.3	0.0	8,950.3	379.6	0.0	0.0	0.0
Department of Defense, research	24,822.8	2,771.0	13,978.1	0.0	7,694.1	379.6	0.0	0.0	0.0
Department of Defense, total experimental development ^b	109,071.6	1,185.7	106,645.4	0.0	1,240.5	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	88,149.6	0.1	88,133.8	0.0	15.7	0.0	0.0	0.0	0.0
Kansas									
Department of Defense, RDT&E	31,171.2	2,562.5	6,204.5	0.0	21,778.8	0.0	625.5	0.0	0.0
Department of Defense, research	22,919.1	1,096.3	498.1	0.0	20,701.8	0.0	622.9	0.0	0.0
Department of Defense, total experimental development ^b	7,950.2	1,355.5	5,622.4	0.0	969.6	0.0	2.6	0.0	0.0
Department of Defense, operational systems development ^c	302.0	110.7	84.0	0.0	107.3	0.0	0.0	0.0	0.0
Kentucky									
Department of Defense, RDT&E	34,362.3	1,380.2	29,865.3	0.0	3,116.8	0.0	0.0	0.0	0.0
Department of Defense, research	4,070.9	476.7	1,397.9	0.0	2,196.3	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	16,245.8	303.8	15,023.4	0.0	918.7	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	14,045.5	599.7	13,444.0	0.0	1.8	0.0	0.0	0.0	0.0
Louisiana									
Department of Defense, RDT&E	126,028.6	1,864.0	118,893.2	0.0	4,719.9	0.0	551.0	0.0	0.4
Department of Defense, research	7,189.4	0.0	2,440.2	0.0	4,337.8	0.0	411.4	0.0	0.0
Department of Defense, total experimental development ^b	116,985.8	1,864.0	114,605.9	0.0	375.8	0.0	139.6	0.0	0.4
Department of Defense, operational systems development ^c	1,853.5	0.0	1,847.1	0.0	6.3	0.0	0.0	0.0	0.0

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Maine									
Department of Defense, RDT&E	24,569.6	492.7	4,959.1	0.0	17,193.0	0.0	1,924.7	0.0	0.0
Department of Defense, research	11,702.0	0.0	428.4	0.0	10,461.8	0.0	811.7	0.0	0.0
Department of Defense, total experimental development ^b	12,800.4	487.3	4,472.8	0.0	6,727.4	0.0	1,113.0	0.0	0.0
Department of Defense, operational systems development ^c	67.2	5.5	57.9	0.0	3.8	0.0	0.0	0.0	0.0
Maryland									
Department of Defense, RDT&E	4,918,047.0	2,725,997.5	1,405,578.1	1,316.4	700,871.8	0.0	78,967.5	5,214.6	101.0
Department of Defense, research	530,443.9	244,547.1	134,569.6	957.5	108,094.1	0.0	41,993.9	200.0	81.8
Department of Defense, total experimental development ^b	3,608,597.6	1,943,679.9	1,117,799.0	359.0	523,030.4	0.0	23,514.1	196.0	19.2
Department of Defense, operational systems development ^c	779,005.5	537,770.4	153,209.6	0.0	69,747.4	0.0	13,459.5	4,818.6	0.0
Massachusetts									
Department of Defense, RDT&E	3,504,705.4	333,401.7	2,130,633.0	0.0	248,497.1	464,914.3	111,352.1	215,907.1	0.0
Department of Defense, research	554,591.9	24,576.1	231,337.6	0.0	198,299.0	61,800.4	35,869.8	2,709.1	0.0
Department of Defense, total experimental development ^b	2,307,703.6	150,723.1	1,602,064.0	0.0	44,904.4	334,039.5	62,524.5	113,448.2	0.0
Department of Defense, operational systems development ^c	642,409.9	158,102.5	297,231.4	0.0	5,293.7	69,074.4	12,957.9	99,749.9	0.0
Michigan									
Department of Defense, RDT&E	1,140,455.8	256,401.7	730,438.0	0.0	58,520.5	0.0	95,095.5	0.0	0.0
Department of Defense, research	120,203.1	9,921.2	14,452.2	0.0	52,397.1	0.0	43,432.5	0.0	0.0
Department of Defense, total experimental development ^b	744,242.0	181,578.9	530,222.3	0.0	5,394.1	0.0	27,046.8	0.0	0.0

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, operational systems development ^c	276,010.7	64,901.7	185,763.4	0.0	729.4	0.0	24,616.3	0.0	0.0
Minnesota									
Department of Defense, RDT&E	220,999.9	5,617.1	169,112.8	0.0	28,056.7	0.0	18,213.4	0.0	0.0
Department of Defense, research	75,401.3	888.0	56,102.1	0.0	18,197.8	0.0	213.4	0.0	0.0
Department of Defense, total experimental development ^b	142,270.5	4,719.3	109,725.8	0.0	9,825.4	0.0	18,000.0	0.0	0.0
Department of Defense, operational systems development ^c	3,328.1	9.7	3,284.9	0.0	33.5	0.0	0.0	0.0	0.0
Mississippi									
Department of Defense, RDT&E	186,414.0	97,308.8	52,840.2	0.0	36,258.2	0.0	6.7	0.0	0.0
Department of Defense, research	18,448.1	7,246.9	642.4	0.0	10,558.9	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	166,576.4	88,732.2	52,141.5	0.0	25,696.0	0.0	6.7	0.0	0.0
Department of Defense, operational systems development ^c	1,389.4	1,329.7	56.3	0.0	3.3	0.0	0.0	0.0	0.0
Missouri									
Department of Defense, RDT&E	1,303,142.9	70,965.7	1,211,105.6	0.0	19,004.9	0.0	2,066.7	0.0	0.0
Department of Defense, research	47,868.9	3,181.5	27,140.9	0.0	15,518.4	0.0	2,028.0	0.0	0.0
Department of Defense, total experimental development ^b	982,092.2	58,099.6	920,484.5	0.0	3,469.3	0.0	38.7	0.0	0.0
Department of Defense, operational systems development ^c	273,181.8	9,684.5	263,480.1	0.0	17.2	0.0	0.0	0.0	0.0
Montana									
Department of Defense, RDT&E	28,590.7	732.7	7,267.0	0.0	20,391.0	0.0	200.0	0.0	0.0
Department of Defense, research	15,617.1	0.0	2,884.6	0.0	12,532.4	0.0	200.0	0.0	0.0

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, total experimental development ^b	8,303.1	492.7	3,333.9	0.0	4,476.6	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	4,670.5	240.0	1,048.5	0.0	3,382.1	0.0	0.0	0.0	0.0
Nebraska									
Department of Defense, RDT&E	46,988.2	9,699.9	32,660.0	0.0	4,186.7	0.0	441.6	0.0	0.0
Department of Defense, research	6,173.1	919.1	1,414.0	0.0	3,398.4	0.0	441.6	0.0	0.0
Department of Defense, total experimental development ^b	8,980.4	1,583.3	6,609.7	0.0	787.5	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	31,834.6	7,197.5	24,636.4	0.0	0.8	0.0	0.0	0.0	0.0
Nevada									
Department of Defense, RDT&E	160,985.6	3,766.0	152,040.2	0.0	5,179.3	0.0	0.0	0.0	0.0
Department of Defense, research	8,223.7	981.3	3,122.7	0.0	4,119.6	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	141,202.5	2,768.3	137,376.8	0.0	1,057.3	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	11,559.4	16.4	11,540.6	0.0	2.4	0.0	0.0	0.0	0.0
New Hampshire									
Department of Defense, RDT&E	507,206.1	10,869.6	488,159.0	0.0	8,096.1	0.0	81.3	0.0	0.0
Department of Defense, research	19,317.9	389.7	11,326.5	0.0	7,601.8	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	428,844.5	8,469.7	419,812.0	0.0	481.4	0.0	81.3	0.0	0.0
Department of Defense, operational systems development ^c	59,043.8	2,010.3	57,020.5	0.0	13.0	0.0	0.0	0.0	0.0
New Jersey									
Department of Defense, RDT&E	2,475,300.5	1,766,014.4	651,687.2	0.0	53,622.6	2,206.1	1,269.2	0.0	500.9

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, RDT&E	3,379.9	1,095.9	594.4	0.0	1,689.6	0.0	0.0	0.0	0.0
Department of Defense, research	1,484.2	12.3	12.7	0.0	1,459.2	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	1,720.4	1,083.7	406.4	0.0	230.4	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	175.3	0.0	175.3	0.0	0.0	0.0	0.0	0.0	0.0
Ohio									
Department of Defense, RDT&E	4,336,531.7	2,347,271.4	1,844,769.0	0.0	107,352.3	0.0	37,139.0	0.0	0.0
Department of Defense, research	754,338.9	421,697.5	211,699.7	0.0	96,381.4	0.0	24,560.3	0.0	0.0
Department of Defense, total experimental development ^b	3,032,802.9	1,645,365.0	1,364,950.7	0.0	10,331.6	0.0	12,155.6	0.0	0.0
Department of Defense, operational systems development ^c	549,390.0	280,208.9	268,118.7	0.0	639.3	0.0	423.0	0.0	0.0
Oklahoma									
Department of Defense, RDT&E	265,190.2	96,980.6	154,970.1	0.0	13,239.5	0.0	0.0	0.0	0.0
Department of Defense, research	19,967.8	894.4	6,673.4	0.0	12,399.9	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	134,678.9	93,332.8	40,524.3	0.0	821.8	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	110,543.6	2,753.4	107,772.4	0.0	17.7	0.0	0.0	0.0	0.0
Oregon									
Department of Defense, RDT&E	104,175.6	1,455.6	90,127.4	0.0	12,592.6	0.0	0.0	0.0	0.0
Department of Defense, research	47,620.4	400.1	37,761.5	0.0	9,458.8	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	51,061.1	1,051.3	46,878.6	0.0	3,131.2	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	5,494.1	4.1	5,487.4	0.0	2.6	0.0	0.0	0.0	0.0

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Pennsylvania									
Department of Defense, RDT&E	1,760,268.7	369,743.3	1,031,784.4	0.0	302,259.6	46,457.7	10,023.7	0.0	0.0
Department of Defense, research	213,346.9	11,531.7	29,679.5	0.0	159,288.3	10,890.0	1,957.4	0.0	0.0
Department of Defense, total experimental development ^b	943,783.1	286,497.7	496,560.4	0.0	134,588.5	24,038.0	2,098.5	0.0	0.0
Department of Defense, operational systems development ^c	603,138.7	71,713.8	505,544.6	0.0	8,382.7	11,529.7	5,967.8	0.0	0.0
Rhode Island									
Department of Defense, RDT&E	471,369.0	308,917.5	134,763.9	0.0	26,949.8	0.0	737.7	0.0	0.0
Department of Defense, research	46,711.1	21,609.1	2,492.5	0.0	21,871.8	0.0	737.7	0.0	0.0
Department of Defense, total experimental development ^b	368,791.6	237,929.4	125,801.3	0.0	5,060.8	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	55,866.4	49,379.0	6,470.1	0.0	17.3	0.0	0.0	0.0	0.0
South Carolina									
Department of Defense, RDT&E	531,962.7	126,389.6	327,343.3	6,383.4	8,513.9	0.0	63,332.4	0.0	0.0
Department of Defense, research	29,238.2	10,342.4	3,486.1	729.0	7,934.0	0.0	6,746.7	0.0	0.0
Department of Defense, total experimental development ^b	268,589.6	54,136.0	151,687.7	5,625.4	554.7	0.0	56,585.7	0.0	0.0
Department of Defense, operational systems development ^c	234,134.8	61,911.2	172,169.5	29.0	25.2	0.0	0.0	0.0	0.0
South Dakota									
Department of Defense, RDT&E	12,967.1	39.4	12,566.2	0.0	361.5	0.0	0.0	0.0	0.0
Department of Defense, research	5,595.2	9.2	5,233.5	0.0	352.5	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	7,263.9	30.2	7,225.8	0.0	7.9	0.0	0.0	0.0	0.0

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, operational systems development ^c	107.9	0.0	106.8	0.0	1.1	0.0	0.0	0.0	0.0
Tennessee									
Department of Defense, RDT&E	743,468.2	249,679.2	445,923.2	0.0	25,758.3	0.0	11,671.9	10,435.6	0.0
Department of Defense, research	67,025.6	22,974.5	2,997.4	0.0	23,386.2	0.0	11,196.6	6,470.9	0.0
Department of Defense, total experimental development ^b	550,727.9	204,936.7	339,491.9	0.0	2,346.2	0.0	475.3	3,477.8	0.0
Department of Defense, operational systems development ^c	125,714.8	21,768.0	103,433.9	0.0	25.9	0.0	0.0	487.0	0.0
Texas									
Department of Defense, RDT&E	2,991,700.8	161,116.4	2,642,014.1	0.0	165,839.1	0.0	18,706.5	4,024.6	0.1
Department of Defense, research	183,625.4	13,446.2	52,944.4	0.0	108,139.0	0.0	9,085.3	10.6	0.0
Department of Defense, total experimental development ^b	1,679,548.5	68,644.0	1,548,753.8	0.0	48,561.3	0.0	9,575.2	4,014.1	0.1
Department of Defense, operational systems development ^c	1,128,526.8	79,026.2	1,040,315.9	0.0	9,138.7	0.0	46.0	0.0	0.0
Utah									
Department of Defense, RDT&E	796,663.4	251,218.6	495,840.6	0.0	48,575.5	0.0	1,028.7	0.0	0.0
Department of Defense, research	25,629.2	1,699.5	2,418.8	0.0	21,081.0	0.0	429.9	0.0	0.0
Department of Defense, total experimental development ^b	453,009.1	143,863.3	284,310.8	0.0	24,236.2	0.0	598.8	0.0	0.0
Department of Defense, operational systems development ^c	318,025.1	105,655.9	209,110.9	0.0	3,258.3	0.0	0.0	0.0	0.0
Vermont									
Department of Defense, RDT&E	26,910.6	819.3	25,614.5	0.0	476.8	0.0	0.0	0.0	0.0
Department of Defense, research	1,134.8	0.0	672.9	0.0	461.8	0.0	0.0	0.0	0.0

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, total experimental development ^b	25,520.3	819.3	24,687.8	0.0	13.1	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	255.6	0.0	253.7	0.0	1.8	0.0	0.0	0.0	0.0
Virginia									
Department of Defense, RDT&E	6,944,837.0	2,143,209.2	4,297,551.2	0.0	109,432.5	0.0	48,850.9	345,767.7	25.6
Department of Defense, research	926,078.8	213,881.4	584,531.7	0.0	84,535.2	0.0	11,821.4	31,309.2	0.0
Department of Defense, total experimental development ^b	5,116,616.0	1,698,128.1	3,106,123.7	0.0	24,536.6	0.0	30,795.0	257,007.0	25.6
Department of Defense, operational systems development ^c	902,142.2	231,199.7	606,895.8	0.0	360.7	0.0	6,234.5	57,451.5	0.0
Washington									
Department of Defense, RDT&E	1,282,852.2	255,345.1	932,030.5	0.0	61,531.5	0.0	5,834.0	28,111.0	0.0
Department of Defense, research	101,763.3	4,986.2	14,549.8	0.0	54,104.4	0.0	5,541.9	22,580.9	0.0
Department of Defense, total experimental development ^b	1,116,842.0	231,040.9	873,101.8	0.0	7,107.5	0.0	292.1	5,299.7	0.0
Department of Defense, operational systems development ^c	64,246.8	19,317.9	44,378.9	0.0	319.6	0.0	0.0	230.5	0.0
West Virginia									
Department of Defense, RDT&E	5,922.6	128.1	2,149.2	0.0	3,192.6	0.0	452.7	0.0	0.0
Department of Defense, research	2,884.8	52.2	97.3	0.0	2,532.6	0.0	202.7	0.0	0.0
Department of Defense, total experimental development ^b	2,984.4	75.9	2,017.0	0.0	641.5	0.0	250.0	0.0	0.0
Department of Defense, operational systems development ^c	53.4	*	34.9	0.0	18.5	0.0	0.0	0.0	0.0
Wisconsin									
Department of Defense, RDT&E	87,555.6	509.3	66,656.4	0.0	20,379.7	0.0	10.2	0.0	0.0

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments
Department of Defense, research	31,006.7	250.0	10,909.6	0.0	19,838.6	0.0	8.5	0.0	0.0
Department of Defense, total experimental development ^b	55,779.4	2.1	55,259.6	0.0	516.0	0.0	1.7	0.0	0.0
Department of Defense, operational systems development ^c	769.5	257.3	487.2	0.0	25.0	0.0	0.0	0.0	0.0
Wyoming									
Department of Defense, RDT&E	3,304.8	11.7	2,351.8	0.0	941.3	0.0	0.0	0.0	0.0
Department of Defense, research	893.5	0.0	1.1	0.0	892.5	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	2,173.3	11.7	2,112.7	0.0	48.8	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	238.0	0.0	238.0	0.0	0.0	0.0	0.0	0.0	0.0
Outlying areas									
Department of Defense, RDT&E	4,459,612.4	4,444,007.8	14,129.7	0.0	1,475.0	0.0	0.0	0.0	0.0
Department of Defense, research	1,657.8	204.0	5.0	0.0	1,448.8	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	368,819.9	368,723.8	73.2	0.0	22.9	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	4,089,134.7	4,075,080.0	14,051.5	0.0	3.2	0.0	0.0	0.0	0.0
Puerto Rico									
Department of Defense, RDT&E	1,766.1	218.9	72.2	0.0	1,475.0	0.0	0.0	0.0	0.0
Department of Defense, research	1,657.8	204.0	5.0	0.0	1,448.8	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	105.1	14.9	67.2	0.0	22.9	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	3.2	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0

TABLE 94

Department of Defense obligations for research, development, test, and evaluation, by state or location and performer: FY 2019

(Dollars in thousands)

State or location and agency	Total	Intramural ^a	Extramural						State, local governments
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	
Other areas ^d									
Department of Defense, RDT&E	4,457,846.3	4,443,788.9	14,057.4	0.0	0.0	0.0	0.0	0.0	0.0
Department of Defense, research	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	368,714.9	368,708.9	5.9	0.0	0.0	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	4,089,131.5	4,075,080.0	14,051.5	0.0	0.0	0.0	0.0	0.0	0.0
Offices abroad ^e									
Department of Defense, RDT&E	3,806.5	141.4	3,321.3	0.0	343.9	0.0	0.0	0.0	0.0
Department of Defense, research	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	3,736.3	141.1	3,251.3	0.0	343.9	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	70.2	0.2	70.0	0.0	0.0	0.0	0.0	0.0	0.0
Undistributed ^f									
Department of Defense, RDT&E	21,644,568.1	1,527,495.3	20,114,774.1	0.0	2,298.7	0.0	0.0	0.0	0.0
Department of Defense, research	881,859.1	549,761.6	331,274.2	0.0	823.3	0.0	0.0	0.0	0.0
Department of Defense, total experimental development ^b	1,455,073.2	776,190.5	677,407.3	0.0	1,475.4	0.0	0.0	0.0	0.0
Department of Defense, operational systems development ^c	19,307,635.8	201,543.2	19,106,092.6	0.0	0.0	0.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50.

FFRDC = federally funded research and development center; RDT&E = research, development, test, and evaluation.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.

^b Department of Defense (DOD) development obligations have been reported in two categories, advanced technology and major systems, since volume 44 (FYs 1994–96). As of volume 66 (FYs 2016–17), the definition of major systems development was changed to represent DOD Budget Activities 4 through 6 instead of Budget Activities 4 through 7.

^c Funding for DOD's operational systems development (Budget Activity 7) was first reported as a separate category for volume 66.

^d Includes American Samoa, Baker Island, Guam, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Islands, Navassa Island, Northern Mariana Islands, Palmyra Atoll, U.S. Virgin Islands, and Wake Island.

^e Includes both R&D and RDT&E performed or administered in foreign countries by the U.S. government.

^f Undistributed totals include DOD obligations for which the location of performance is not reported.

Note(s):

Because of rounding, detail may not add to total. Geographic distribution of DOD development funding to industry reflects location of prime contractors and not the numerous subcontractors who perform much of the R&D. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 95

Federal obligations for research and experimental development to intramural performers for personnel costs, by agency: FYs 2019–20

(Dollars in thousands)

Agency	Total intramural R&D (2019)	Personnel costs (2019)		Total intramural R&D (2020)	Personnel costs (2020)	
		Amount	% of total		Amount	% of total
All agencies	39,312,750.4	13,227,485.2	33.6	42,404,871.1	13,448,772.7	31.7
Departments						
Department of Agriculture	1,643,887.9	934,859.6	56.9	1,792,910.1	983,643.0	54.9
Agricultural Marketing Service	7,710.5	5,782.9	75.0	6,952.5	5,214.4	75.0
Agricultural Research Service	1,147,417.9	640,284.0	55.8	1,305,282.8	686,757.0	52.6
Animal and Plant Health Inspection Service	28,587.9	13,722.2	48.0	28,643.0	13,748.6	48.0
Economic Research Service	73,922.6	45,678.0	61.8	73,633.0	31,712.0	43.1
Forest Service	300,000.0	188,000.0	62.7	277,825.6	193,000.0	69.5
National Agricultural Statistics Service	8,656.9	6,907.2	79.8	7,965.8	6,907.2	86.7
National Institute of Food and Agriculture	77,592.1	34,485.4	44.4	92,607.5	46,303.7	50.0
Department of Commerce	1,102,118.7	615,497.0	55.8	1,155,298.4	666,465.5	57.7
National Institute of Standards and Technology	602,288.8	383,983.0	63.8	624,740.3	405,849.9	65.0
National Oceanic and Atmospheric Administration	396,327.4	188,349.7	47.5	402,540.0	203,224.1	50.5
National Telecommunications and Information Administration	7,900.0	5,260.0	66.6	8,180.0	5,400.0	66.0
U.S. Census Bureau	95,602.6	37,904.3	39.6	119,838.1	51,991.5	43.4
Department of Defense	20,314,486.6	3,961,642.7	19.5	21,826,438.4	4,348,952.5	19.9
Defense Advanced Research Projects Agency	344,034.1	253,191.8	73.6	395,482.2	277,255.9	70.1
Department of the Air Force	4,321,737.3	1,813,570.9	42.0	4,590,375.9	1,871,833.4	40.8
Department of the Army	3,834,386.6	573,025.0	14.9	4,060,754.1	597,727.3	14.7
Department of the Navy	6,066,597.9	135,731.2	2.2	6,713,193.9	240,667.1	3.6
Other defense agencies	5,747,730.7	1,186,123.8	20.6	6,066,632.3	1,361,468.8	22.4
Department of Education	10,400.3	7,446.6	71.6	10,392.1	7,449.5	71.7
Department of Energy	1,052,331.6	216,199.8	20.5	1,357,953.7	219,304.2	16.1
Electricity Delivery and Energy Reliability	3,148.9	2,361.7	75.0	3,517.5	2,638.2	75.0
Fossil Energy	601,000.0	80,000.0	13.3	605,000.0	80,000.0	13.2
National Nuclear Security Administration	173,017.9	*	**	243,253.1	50.0	**
Defense Programs	173,017.9	*	**	233,253.1	*	**
Office of Defense Nuclear Nonproliferation	0.0	0.0	-	10,000.0	50.0	0.5
Nuclear Energy	2,623.4	2.0	0.1	1,400.0	2.0	0.1
Office of Cybersecurity, Energy Security, and Emergency Response	29.1	1.2	4.1	30.0	2.0	6.7
Office of Science	272,512.3	133,834.9	49.1	504,753.0	136,612.0	27.1
Department of Health and Human Services	7,753,166.1	2,482,404.2	32.0	8,182,730.7	2,637,301.9	32.2
Administration for Children and Families	205.0	3.1	1.5	575.0	3.1	0.5
Agency for Healthcare Research and Quality	76,783.1	40,440.9	52.7	48,270.0	100.0	0.2

TABLE 95

Federal obligations for research and experimental development to intramural performers for personnel costs, by agency: FYs 2019–20

(Dollars in thousands)

Agency	Total intramural R&D (2019)	Personnel costs (2019)		Total intramural R&D (2020)	Personnel costs (2020)	
		Amount	% of total		Amount	% of total
Centers for Disease Control and Prevention	140,325.8	85,871.1	61.2	132,454.2	72,778.6	54.9
Food and Drug Administration	360,481.0	1,100.0	0.3	361,904.8	2,000.0	0.6
Health Resources and Services Administration	4,224.1	3,977.1	94.2	3,655.1	3,408.1	93.2
National Institutes of Health	7,168,394.8	2,351,000.0	32.8	7,633,119.4	2,559,000.0	33.5
Office of the Secretary of Health and Human Services	2,752.2	12.0	0.4	2,752.2	12.0	0.4
Office of the Assistant Secretary for Planning and Evaluation	2,752.2	12.0	0.4	2,752.2	12.0	0.4
Department of Homeland Security	179,906.5	47,443.1	26.4	143,935.3	33,864.9	23.5
Countering Weapons of Mass Destruction Office	3,256.1	1,200.0	36.9	3,989.8	2,954.0	74.0
Cybersecurity and Infrastructure Security Agency	1,683.6	1,683.6	100.0	4,510.9	4,510.9	100.0
Science and Technology Directorate	162,373.3	32,474.7	20.0	132,000.0	26,400.0	20.0
U.S. Coast Guard	12,593.5	12,084.8	96.0	3,434.6	*	**
Department of Housing and Urban Development	42,893.8	20,800.0	48.5	40,836.9	21,900.0	53.6
Department of the Interior	695,026.1	462,604.2	66.6	750,872.9	483,993.7	64.5
Bureau of Ocean Energy Management	62,503.7	33,360.8	53.4	78,818.9	35,077.0	44.5
Bureau of Reclamation	14,884.0	10,250.0	68.9	29,000.0	12,250.0	42.2
Bureau of Safety and Environmental Enforcement	2,716.7	848.8	31.2	4,870.8	2,517.2	51.7
Office of Surface Mining Reclamation and Enforcement	327.5	305.7	93.4	330.0	308.1	93.4
U.S. Fish and Wildlife Service	32,650.0	13,788.1	42.2	32,650.0	13,788.1	42.2
U.S. Geological Survey	581,944.3	404,050.7	69.4	605,203.2	420,053.2	69.4
Department of Justice	6,004.0	2,085.2	34.7	6,196.6	2,244.3	36.2
Bureau of Prisons	2,204.0	2,071.8	94.0	2,248.0	2,158.1	96.0
Office of Justice Programs	3,800.0	13.4	0.4	3,948.6	86.2	2.2
Department of Labor	3,309.5	3,299.5	99.7	3,572.0	3,562.0	99.7
Employee Benefits Security Administration	1,585.5	1,575.5	99.4	1,815.3	1,805.3	99.4
Occupational Safety and Health Administration	1,724.0	1,724.0	100.0	1,756.8	1,756.8	100.0
Department of State	62,200.0	62,200.0	100.0	62,300.0	62,300.0	100.0
Department of Transportation	189,560.6	97,327.7	51.3	259,321.4	123,070.8	47.5
Federal Aviation Administration	88,239.2	51,996.8	58.9	138,581.3	76,758.2	55.4
Federal Highway Administration	57,201.0	21,647.0	37.8	69,530.7	21,515.0	30.9
Federal Motor Carrier Safety Administration	5,600.7	2,141.9	38.2	8,164.1	2,324.1	28.5
Federal Railroad Administration	5,054.8	1,789.3	35.4	8,035.4	2,571.3	32.0
National Highway Traffic Safety Administration	9,258.2	9,258.2	100.0	9,443.4	9,443.4	100.0
Office of the Secretary of Transportation	13,686.0	8,585.5	62.7	21,957.4	8,549.9	38.9
Pipeline and Hazardous Materials Safety Administration	10,520.7	1,909.0	18.1	3,609.0	1,909.0	52.9

TABLE 95

Federal obligations for research and experimental development to intramural performers for personnel costs, by agency: FYs 2019–20

(Dollars in thousands)

Agency	Total intramural R&D (2019)	Personnel costs (2019)		Total intramural R&D (2020)	Personnel costs (2020)	
		Amount	% of total		Amount	% of total
Department of the Treasury	177.7	177.7	100.0	2,575.6	1,955.9	75.9
Bureau of Engraving and Printing	0.0	0.0	-	2,400.0	1,900.0	79.2
U.S. Mint	177.7	177.7	100.0	175.6	55.9	31.8
Department of Veterans Affairs	1,436,818.2	668,225.0	46.5	1,527,587.0	702,090.6	46.0
Other agencies						
Agency for International Development	21,014.3	16,371.3	77.9	21,014.3	1,050.7	5.0
Consumer Product Safety Commission	856.3	153.0	17.9	200.0	159.0	79.5
Environmental Protection Agency	249,377.0	244,683.0	98.1	244,632.0	239,938.0	98.1
Federal Communications Commission	2,005.3	2,005.3	100.0	1,800.0	1,800.0	100.0
Federal Trade Commission	6,003.2	3,736.2	62.2	7,324.8	4,558.6	62.2
Library of Congress	1,892.5	995.1	52.6	2,731.2	1,070.6	39.2
National Aeronautics and Space Administration	4,144,645.6	3,123,917.0	75.4	4,630,943.7	2,675,055.5	57.8
National Archives and Records Administration	391.2	369.4	94.4	0.0	0.0	-
National Science Foundation	36,661.5	*	**	37,593.9	*	**
Nuclear Regulatory Commission	30,267.8	20,296.4	67.1	31,281.9	20,087.9	64.2
Smithsonian Institution	236,440.0	141,838.2	60.0	241,440.0	143,965.6	59.6
Social Security Administration	90,908.0	90,908.0	100.0	62,988.0	62,988.0	100.0

* = amount greater than \$0 but less than \$50. ** = percentage greater than 0.00 but less than 0.05%. - = no value possible.

Note(s):

Because of rounding, detail may not add to total. Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, FYs 2019–20.

TABLE 96

Federal outlays for research, development, and R&D plant, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All agencies	81,167.3	87,061.8	92,685.9	104,337.1	109,030.5	121,230.1	118,908.6	123,998.3	125,125.3	129,678.7	137,523.1
Departments											
Department of Agriculture	1,659.6	1,869.5	2,026.1	2,043.4	2,161.4	2,281.5	2,369.5	2,433.5	2,401.8	2,303.7	2,434.6
Agricultural Marketing Service	4.8	4.7	5.2	4.7	8.4	9.4	6.3	6.4	3.8	4.3	4.4
Agricultural Research Service	886.8	1,014.6	1,131.4	1,100.0	1,192.9	1,248.7	1,305.7	1,293.7	1,275.4	1,176.5	1,255.8
Animal and Plant Health Inspection Service	20.6	25.4	23.7	28.0	24.4	24.4	25.5	26.0	28.4	24.6	25.6
Economic Research Service	63.9	66.1	69.9	70.3	65.7	74.6	72.8	90.6	77.8	79.7	86.4
Food Safety and Inspection Service	2.3	2.6	NA	NA	NA	NA	NA	NA	NA	NA	NA
Foreign Agricultural Service	1.4	1.4	1.4	1.6	1.6	1.5	0.9	0.6	0.4	0.4	0.4
Forest Service	244.0	263.0	292.0	321.0	345.0	343.0	354.5	360.0	358.9	367.5	432.8
Grain Inspection, Packers, and Stockyards Administration	3.6	6.1	6.0	5.3	6.7	6.7	7.1	6.7	6.6	6.5	6.3
National Agricultural Statistics Service	3.6	4.3	4.6	5.5	6.1	6.1	6.5	6.8	6.9	7.2	7.5
National Institute of Food and Agriculture	425.4	478.9	487.6	503.1	506.8	563.5	586.0	621.8	639.3	634.0	611.7
Rural Business-Cooperative Service	3.1	2.4	4.2	3.8	3.8	3.6	4.1	21.0	4.2	3.0	3.7
Department of Commerce	1,086.3	1,015.8	1,232.6	1,248.2	1,156.6	747.5	710.2	1,059.3	1,165.9	1,252.4	1,409.3
Economic Development Administration	0.6	0.6	0.4	0.5	0.2	0.5	0.2	0.8	20.7	28.3	33.7
National Institute of Standards and Technology	433.6	474.2	532.2	536.6	558.1	478.5	467.1	457.5	493.2	501.2	636.5
National Oceanic and Atmospheric Administration	597.1	501.0	651.3	667.8	550.0	242.1	215.5	573.7	627.1	686.9	684.7
National Telecommunications and Information Administration	23.0	21.0	26.0	23.5	24.2	3.5	5.3	5.3	0.3	6.9	7.0
U.S. Census Bureau	32.0	19.0	22.7	19.9	24.2	23.0	22.0	22.0	24.7	29.0	47.2
Department of Defense	38,559.0	40,590.1	42,032.3	49,852.1	53,165.3	64,521.6	63,817.6	68,708.7	68,861.8	66,971.2	67,763.1
Defense agencies and activities	5,611.3	7,287.9	10,479.1	11,879.0	11,140.8	17,133.7	14,005.4	14,722.8	15,559.8	15,606.9	15,209.9
Department of the Air Force	18,819.4	17,599.3	14,161.8	18,153.0	19,721.4	20,950.8	21,445.9	24,498.1	24,213.6	23,569.4	26,235.0
Department of the Army	4,821.7	5,797.0	6,619.9	7,092.1	6,954.2	9,847.2	10,662.1	10,360.0	11,057.1	10,124.8	9,209.6
Department of the Navy	9,016.3	9,675.4	10,576.2	12,484.9	15,043.8	16,269.8	17,442.7	18,934.7	17,851.0	17,491.6	16,924.3
Operational Test and Evaluation, Director	32.9	205.3	195.5	243.1	305.0	320.1	261.6	193.1	180.3	178.5	184.2
Test and Evaluation, Deputy Under Secretary of Defense	257.4	25.3	na	na	na	na	na	na	na	na	na
Department of Education	222.4	251.0	243.1	315.6	226.9	264.3	254.5	271.2	286.8	312.0	321.7
Department of Energy	6,874.2	7,415.6	8,034.6	8,424.5	8,501.7	8,607.0	8,213.1	8,444.0	8,856.6	9,770.8	9,890.6
Advanced Research Projects Agency—Energy	na	na	na	na	na	na	na	na	0.0	0.0	63.8
Bonneville Power Administration	NA	NA	22.9	23.3	24.0	11.3	10.7	11.1	13.7	8.1	13.1
Civilian Radioactive Waste Management	NA	NA	62.5	75.8	74.1	74.1	52.9	10.5	8.4	1.7	0.0
Electricity Delivery and Energy Reliability	na	na	na	na	na	71.8	108.3	54.4	89.4	87.1	83.0
Energy Efficiency and Renewable Energy	na	NA	739.8	688.5	603.6	593.9	456.7	648.2	794.0	729.5	968.5
Environmental Management	NA	NA	160.3	69.4	42.8	49.8	34.0	32.0	35.8	13.1	69.9
Fossil Energy	NA	NA	480.5	642.7	505.5	538.8	386.1	430.6	325.0	358.6	364.5

TABLE 96

Federal outlays for research, development, and R&D plant, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
National Nuclear Security Administration	NA	NA	3,711.7	3,895.1	4,005.3	3,925.0	3,858.1	3,794.1	3,999.3	3,661.1	3,769.2
Defense Programs	NA	NA	2,770.0	2,996.7	3,135.1	3,001.3	2,865.2	2,827.8	2,939.4	2,575.8	2,486.5
Fissile Materials Disposition	NA	NA	22.0	16.6	1.0	0.0	0.0	0.0	NA	NA	NA
Naval Nuclear Propulsion Program	NA	NA	654.4	658.3	706.0	778.3	749.6	761.4	760.9	770.2	945.1
Office of Defense Nuclear Nonproliferation	NA	NA	265.4	223.5	163.3	145.5	243.3	204.8	299.0	315.1	337.6
Nuclear Energy	NA	NA	28.2	43.0	79.3	82.8	89.0	80.9	133.1	116.0	368.1
Office of Intelligence	NA	NA	5.2	4.0	0.0	NA	NA	NA	NA	NA	NA
Office of Science	NA	NA	2,823.4	2,982.7	3,167.0	3,259.6	3,217.3	3,382.2	3,457.9	4,795.7	4,190.6
Department of Health and Human Services	18,406.8	21,296.7	23,892.1	27,316.4	28,263.2	28,861.7	28,799.4	29,261.3	29,268.4	35,295.5	36,610.2
Administration for Children and Families	25.4	26.4	21.7	19.4	18.7	38.6	13.4	11.8	19.2	13.7	6.5
Administration for Community Living	1.1	1.6	2.1	4.0	3.0	2.0	3.0	3.0	0.0	0.0	0.0
Agency for Healthcare Research and Quality	50.8	33.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agency for Toxic Substances and Disease Registry	14.7	13.1	12.4	14.3	10.7	9.5	9.0	4.2	4.3	4.5	2.8
Centers for Disease Control and Prevention	439.0	544.0	521.0	564.0	539.8	510.8	688.5	678.7	413.7	338.9	343.0
Centers for Medicare and Medicaid Services	44.4	53.0	72.9	73.6	89.0	89.0	62.4	86.0	69.8	57.4	53.9
Food and Drug Administration	143.8	152.4	129.7	158.1	134.0	140.0	139.8	130.2	138.0	163.9	201.1
Health Resources and Services Administration	36.2	51.6	54.7	439.5	48.0	53.4	24.1	23.9	62.3	56.4	67.0
National Institutes of Health	17,134.8	19,771.3	22,343.5	25,964.6	27,311.8	27,926.0	27,778.1	28,257.4	28,539.6	34,640.7	35,881.7
Office of the Secretary of Health and Human Services	18.7	15.6	16.5	21.7	21.1	24.8	26.8	24.5	21.5	20.0	54.4
Office of Public Health and Science	2.0	1.7	1.6	1.8	NA	NA	NA	NA	NA	NA	NA
Office of the Assistant Secretary for Planning and Evaluation	16.7	13.9	14.9	19.9	21.1	24.8	26.8	24.5	21.5	20.0	54.4
Substance Abuse and Mental Health Services Administration	497.8	634.3	717.6	57.2	87.2	67.6	54.3	41.8	0.0	0.0	NA
Department of Homeland Security	na	na	na	NA	592.3	1,027.6	1,713.9	1,181.3	1,009.3	438.3	976.0
Science and Technology Directorate	na	na	na	NA	432.4	834.7	1,677.0	1,153.0	993.0	417.3	949.0
Transportation Security Administration	na	na	na	NA	137.9	180.5	12.2	3.8	0.0	0.0	NA
U.S. Coast Guard	na	na	na	NA	21.1	11.4	23.8	23.7	15.6	21.0	27.0
U.S. Secret Service	na	na	na	NA	1.0	1.0	1.0	0.8	0.7	NA	NA
Department of Housing and Urban Development	43.7	64.2	57.7	54.3	43.2	47.9	42.0	32.5	32.5	36.4	50.5
Department of the Interior	581.2	623.2	633.2	600.9	612.2	597.0	607.6	625.7	644.4	744.9	725.6
Bureau of Ocean Energy Management, Regulation and Enforcement	30.5	28.0	31.7	29.5	29.5	29.9	31.2	28.7	34.3	39.4	43.7
Bureau of Reclamation	9.8	9.7	10.4	11.0	16.3	17.3	11.1	15.5	15.2	17.3	13.3
National Park Service	34.7	12.9	26.2	10.3	14.3	3.5	3.8	7.7	8.5	14.1	7.6
U.S. Geological Survey	506.1	572.6	565.0	550.2	552.2	546.2	561.5	573.8	586.4	674.1	661.1
Department of Justice	42.8	67.4	67.7	103.2	68.7	66.1	71.4	123.9	112.9	103.4	118.6
Bureau of Prisons	6.6	12.0	8.7	9.7	9.4	12.5	12.1	12.7	10.6	10.5	10.8

TABLE 96

Federal outlays for research, development, and R&D plant, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Federal Bureau of Investigation	10.0	19.0	33.6	42.8	34.0	33.5	34.3	70.8	26.1	14.5	30.0
Immigration and Naturalization Service	0.6	0.9	0.0	na	na	na	na	na	na	na	na
Office of Justice Programs	25.7	35.5	25.4	50.7	25.3	20.1	25.0	40.4	76.2	78.4	77.8
Department of Labor	82.7	95.5	164.6	176.4	198.2	162.9	94.3	59.3	84.4	71.6	13.0
Bureau of Labor Statistics	12.3	21.5	20.7	20.6	22.4	22.5	22.8	23.7	24.2	0.0	NA
Employee Benefits Security Administration	1.8	1.3	0.9	2.1	1.3	1.3	1.6	0.8	1.1	1.1	4.5
Employment and Training Administration	60.9	60.9	137.1	148.0	170.1	133.7	64.1	29.4	53.7	64.2	NA
Occupational Safety and Health Administration	5.7	5.7	3.8	3.1	3.3	3.4	3.5	3.4	3.6	4.5	5.9
Office of the Secretary of Labor	1.3	5.4	1.2	1.8	0.2	0.4	0.3	0.3	0.0	0.0	0.0
Pension Benefit Guaranty Corp.	0.7	0.7	0.7	0.9	0.9	1.6	1.9	1.8	1.8	1.9	2.6
Department of State	0.9	1.6	1.6	1.6	2.3	2.6	3.4	3.0	3.0	3.7	2.9
Department of Transportation	449.6	515.4	732.9	592.0	569.4	412.1	884.3	775.3	625.8	544.5	781.0
Federal Aviation Administration	230.2	203.0	309.0	250.0	262.0	241.0	307.0	282.0	218.0	197.0	258.0
Federal Highway Administration	106.7	201.9	209.0	230.0	238.1	73.9	400.1	339.9	259.7	214.9	352.4
Federal Motor Carrier Safety Administration	0.4	5.5	2.0	2.9	4.3	6.6	4.2	12.7	6.6	6.9	6.9
Federal Railroad Administration	25.3	21.0	28.4	27.9	32.6	22.8	58.7	36.6	39.6	41.6	45.4
Federal Transit Administration	12.0	3.7	2.3	3.8	4.4	4.2	6.5	4.0	7.0	6.9	21.7
National Highway Traffic Safety Administration	40.5	46.7	47.1	50.7	7.0	31.7	75.0	66.0	58.7	44.3	64.6
Office of the Secretary of Transportation	7.5	7.0	11.1	15.7	11.0	28.8	15.6	16.2	15.9	19.5	20.3
Pipeline and Hazardous Materials Safety Administration	na	na	na	na	10.0	2.2	15.2	15.9	13.3	4.5	7.6
Research and Innovative Technology Administration	na	na	na	na	0.0	1.0	2.0	2.0	7.0	9.0	4.0
Research and Special Programs Administration	7.0	7.5	9.0	11.0	na	na	na	na	na	na	na
Transportation Security Administration	na	na	95.0	na	na	na	na	na	na	na	na
U.S. Coast Guard	20.0	19.3	20.0	na	na	na	na	na	na	na	na
Department of the Treasury	60.4	65.1	70.7	60.0	62.4	66.4	65.1	63.6	65.5	68.5	68.5
Bureau of Engraving and Printing	2.8	4.7	7.1	4.9	4.2	6.2	6.0	5.3	5.3	3.0	1.2
Internal Revenue Service	53.3	56.6	55.5	54.4	57.3	57.8	55.4	54.8	59.6	64.9	66.3
Office of Thrift Supervision	0.1	0.1	0.1	0.0	NA	NA	NA	NA	NA	NA	NA
U.S. Customs Service	1.9	2.2	7.1	na	na	na	na	na	na	na	na
U.S. Mint	1.3	0.8	*	0.7	1.0	2.4	3.7	3.5	0.6	0.7	1.1
U.S. Secret Service	1.0	0.7	0.8	na	na	na	na	na	na	na	na
Department of Veterans Affairs	342.0	345.3	329.2	365.7	405.6	402.3	412.0	446.5	480.0	510.0	581.0
Other agencies											
Agency for International Development	179.0	195.0	202.0	220.0	254.0	260.4	255.0	234.5	123.8	156.2	168.7
Appalachian Regional Commission	0.6	0.7	0.7	0.7	0.6	0.7	0.7	0.6	0.6	1.0	0.6
Consumer Product Safety Commission	0.0	0.1	0.0	0.0	NA	NA	NA	NA	NA	NA	NA

TABLE 96

Federal outlays for research, development, and R&D plant, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Environmental Protection Agency	492.0	550.0	561.0	550.0	0.2	0.5	0.2	0.5	532.0	552.8	594.7
Federal Communications Commission	2.8	2.7	4.4	4.5	8.5	8.8	7.6	8.5	6.7	7.0	3.7
Federal Trade Commission	0.7	0.7	1.8	2.3	1.6	1.2	1.6	1.5	2.6	2.4	3.0
General Services Administration	0.1	0.6	*	0.0	0.0	0.0	0.0	NA	NA	NA	NA
Library of Congress	2.2	1.8	2.8	3.0	1.2	6.3	7.4	12.0	1.4	0.8	1.2
National Aeronautics and Space Administration	9,291.0	9,167.0	9,142.0	8,719.9	8,746.3	8,656.6	6,209.6	5,930.3	6,071.7	5,814.9	8,880.9
National Archives and Records Administration	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	4.6	4.6	4.6
National Science Foundation	2,616.0	2,762.0	3,074.0	3,507.0	3,796.0	4,025.0	4,102.0	4,022.0	4,205.0	4,370.0	5,758.0
Nuclear Regulatory Commission	47.0	40.0	47.0	38.0	55.0	57.0	59.0	58.8	41.7	74.0	81.0
Smithsonian Institution	95.5	95.5	103.5	100.5	106.0	110.0	139.0	172.0	182.0	200.0	217.0
Social Security Administration	28.8	28.9	27.9	36.8	30.4	35.1	67.8	68.2	54.1	67.9	63.0
U.S. Agency for Global Media	0.1	*	0.3	0.0	1.2	*	0.2	NA	NA	NA	NA

* = amount greater than \$0 but less than \$50,000. na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had outlays in variables represented by this table appear in the table. FYs 2009 and 2010 outlays include additional funding provided by the American Recovery and Reinvestment Act of 2009. See [technical table A-2](#) for additional notes associated with agencies listed in this table.

Source(s):

National Science Foundation, National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 97

Federal outlays for research, development, and R&D plant, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
All agencies	135,752.8	131,030.2	129,084.3	130,720.4	130,495.0	111,779.9	113,222.7	120,916.2	129,870.4	142,166.9
Departments										
Department of Agriculture	2,419.5	2,359.8	2,256.4	2,339.9	2,338.7	2,431.9	2,345.0	2,346.6	2,546.8	3,313.4
Agricultural Marketing Service	4.3	4.3	5.0	5.7	6.8	6.7	7.2	7.2	7.7	7.0
Agricultural Research Service	1,263.5	1,153.1	1,086.3	1,035.1	1,085.7	1,123.6	1,154.5	1,124.1	1,188.9	1,479.0
Animal and Plant Health Inspection Service	24.6	31.8	31.3	37.1	34.2	39.1	39.1	38.5	39.1	39.1
Economic Research Service	87.9	80.2	78.6	77.0	74.4	94.4	81.5	86.6	82.2	87.0
Foreign Agricultural Service	0.6	0.7	0.7	0.2	0.6	0.2	0.2	0.0	0.0	0.5
Forest Service	370.0	364.8	349.9	337.5	343.9	349.0	343.3	342.6	332.6	414.0
Grain Inspection, Packers, and Stockyards Administration	6.7	6.7	6.2	7.6	8.1	8.0	0.3	na	na	na
National Agricultural Statistics Service	7.4	7.4	7.5	9.4	9.3	9.3	9.4	9.5	9.5	9.0
National Institute of Food and Agriculture	653.8	706.8	688.0	824.4	772.3	798.0	706.1	735.3	884.0	1,275.0
Rural Business-Cooperative Service	0.7	3.9	3.0	5.8	3.5	3.6	3.3	2.8	2.8	2.8
Department of Commerce	1,589.7	1,402.3	1,261.6	1,446.6	1,417.2	1,541.8	1,709.9	1,706.7	1,907.6	1,897.8
Economic Development Administration	15.5	NA	NA	NA	NA	NA	NA	NA	NA	NA
National Institute of Standards and Technology	741.7	719.9	575.8	603.7	671.3	706.1	708.5	745.5	836.1	859.8
National Oceanic and Atmospheric Administration	765.7	573.4	546.7	633.8	593.0	655.0	773.0	844.0	967.0	909.0
National Telecommunications and Information Administration	7.2	7.4	7.8	7.9	11.3	10.3	8.1	7.3	8.9	9.2
U.S. Census Bureau	59.5	101.7	131.3	201.2	141.6	170.4	220.3	109.9	95.6	119.8
Department of Defense	72,659.3	65,391.7	65,106.7	63,646.4	62,250.8	42,868.2	42,211.9	45,237.9	48,488.5	54,648.4
Defense Advanced Research Projects Agency	2,889.3	2,833.3	2,692.2	2,807.7	2,832.5	2,870.6	2,877.1	2,996.0	3,253.7	3,403.7
Department of the Air Force	25,970.1	25,178.4	24,857.6	23,316.0	23,441.6	7,259.6	7,600.5	11,194.0	12,035.5	15,134.1
Department of the Army	8,125.0	6,688.5	7,816.8	7,653.1	7,306.3	6,805.4	7,631.0	7,011.3	9,293.2	10,203.4
Department of the Navy	15,361.7	14,364.5	15,505.7	15,456.5	14,692.8	15,195.3	14,427.3	12,560.8	11,029.1	12,102.8
Other defense agencies	20,313.3	16,327.0	14,234.4	14,413.2	13,977.6	10,737.4	9,676.0	11,475.7	12,877.0	13,804.4
Department of Education	105.7	101.6	97.2	344.8	318.0	212.2	245.8	235.3	226.4	203.0
Department of Energy	10,456.2	10,313.7	9,860.8	11,033.5	12,295.4	12,853.2	13,187.3	16,672.1	16,893.2	20,007.0
Advanced Research Projects Agency—Energy	118.4	142.4	143.6	187.2	245.2	237.9	269.2	250.9	247.1	352.1
Bonneville Power Administration	13.2	14.5	14.4	16.0	15.6	15.6	14.0	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	89.5	101.1	45.3	73.1	107.6	91.7	133.0	103.8	144.2	146.8
Energy Efficiency and Renewable Energy	888.5	909.8	721.0	964.1	1,047.3	1,145.0	1,283.6	1,549.0	3,189.6	3,632.9
Environmental Management	67.5	45.8	9.1	23.2	24.2	22.8	28.7	38.0	29.3	31.4
Fossil Energy	303.1	298.1	376.3	441.7	649.9	624.5	636.1	682.9	682.0	709.0
National Nuclear Security Administration	4,185.6	4,012.5	3,930.5	4,393.8	4,514.7	4,806.5	4,925.7	4,324.0	5,752.5	7,748.0
Defense Programs	2,887.8	2,701.1	2,642.8	2,981.3	3,063.5	3,082.0	3,256.5	2,726.0	3,634.9	5,697.7
Naval Nuclear Propulsion Program	974.3	1,080.0	994.1	1,115.5	1,238.5	1,375.5	1,420.1	1,282.0	1,788.6	1,648.4

TABLE 97

Federal outlays for research, development, and R&D plant, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
Office of Defense Nuclear Nonproliferation	323.5	231.5	293.6	297.0	212.7	348.9	249.0	316.0	329.0	402.0
Nuclear Energy	387.8	361.2	263.4	323.9	760.4	832.6	811.1	846.0	1,109.5	657.3
Office of Cybersecurity, Energy Security, and Emergency Response	na	na	na	na	na	na	na	0.0	36.3	67.4
Office of Science	4,402.6	4,428.2	4,357.2	4,610.5	4,930.4	5,076.7	5,086.1	8,877.5	5,702.7	6,662.1
Department of Health and Human Services	30,458.6	30,876.0	29,430.8	30,564.2	29,624.2	29,663.3	31,385.8	33,218.7	35,426.7	37,827.0
Administration for Children and Families	9.3	8.1	2.6	2.6	2.5	3.0	2.0	1.3	2.4	1.6
Administration for Community Living	0.0	0.0	0.0	0.0	76.0	83.1	83.3	82.7	83.1	90.2
Agency for Healthcare Research and Quality	0.0	0.0	365.0	364.0	364.0	334.0	324.0	334.0	338.0	338.0
Agency for Toxic Substances and Disease Registry	5.1	1.4	1.1	1.4	1.8	2.2	2.8	2.8	7.0	7.0
Biomedical Advanced Research and Development Authority	NA	NA	NA	NA	NA	NA	NA	NA	280.8	16.9
Centers for Disease Control and Prevention	296.5	445.3	300.5	198.0	275.3	198.0	208.0	200.1	187.2	181.6
Centers for Medicare and Medicaid Services	45.2	33.8	20.0	33.6	24.0	29.5	29.8	230.7	5.8	5.8
Food and Drug Administration	214.9	336.9	344.5	371.7	358.9	485.9	464.2	456.2	469.7	480.5
Health Resources and Services Administration	37.4	20.9	37.3	38.5	41.7	41.7	45.8	33.7	26.6	19.4
National Institutes of Health	29,830.3	30,010.1	28,341.3	29,535.9	28,462.0	28,468.0	30,209.0	31,860.0	34,009.0	36,669.0
Office of the Secretary of Health and Human Services	19.9	19.5	18.6	18.6	18.0	18.0	16.9	17.1	17.0	17.0
Office of the Assistant Secretary for Planning and Evaluation	19.9	19.5	18.6	18.6	18.0	18.0	16.9	17.1	17.0	17.0
Department of Homeland Security	1,165.7	827.9	614.0	855.8	704.0	731.6	1,026.3	1,077.4	1,069.5	983.5
Countering Weapons of Mass Destruction Office	NA	NA	NA	73.5	71.3	63.0	69.3	64.9	81.4	47.7
Cybersecurity and Infrastructure Security Agency	na	na	na	na	na	na	na	7.2	13.1	14.4
Science and Technology Directorate	1,144.0	806.0	592.0	757.0	607.0	646.4	934.8	966.1	929.0	885.0
Transportation Security Administration	NA	NA	NA	NA	NA	NA	NA	20.2	20.6	22.9
U.S. Coast Guard	21.7	21.9	22.0	25.2	25.7	22.2	22.2	17.8	23.4	1.2
U.S. Secret Service	NA	NA	NA	NA	NA	NA	NA	1.2	1.9	12.2
Department of Housing and Urban Development	50.1	53.5	63.8	66.7	56.0	74.7	71.0	70.5	63.0	64.0
Department of the Interior	713.8	744.6	705.2	744.9	812.6	865.0	864.4	754.3	804.4	843.7
Bureau of Indian Affairs	NA	NA	NA	NA	NA	NA	NA	5.0	5.0	5.0
Bureau of Land Management	NA	NA	NA	NA	16.4	18.0	18.0	20.8	20.8	20.8
Bureau of Ocean Energy Management	na	39.0	30.5	48.0	50.0	73.0	73.1	77.4	73.3	69.6
Bureau of Ocean Energy Management, Regulation and Enforcement	49.6	na	na	na	na	na	na	na	na	na
Bureau of Reclamation	15.1	12.0	13.0	14.2	12.7	22.0	28.6	24.6	24.3	37.5
Bureau of Safety and Environmental Enforcement	na	15.4	18.4	18.1	27.6	33.9	23.4	8.0	15.0	18.5
National Park Service	9.2	5.3	7.0	15.2	8.3	8.7	9.5	0.8	0.9	0.9
Office of Surface Mining Reclamation and Enforcement	NA	NA	NA	NA	NA	NA	NA	1.1	1.0	0.8

TABLE 97

Federal outlays for research, development, and R&D plant, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
U.S. Fish and Wildlife Service	NA	NA	NA	NA	31.9	32.5	24.0	24.0	24.0	25.8
U.S. Geological Survey	640.0	672.8	636.3	649.5	665.8	676.9	687.8	592.6	640.2	664.8
Department of Justice	102.3	67.0	109.7	160.5	56.9	69.1	23.8	19.7	19.6	19.1
Bureau of Prisons	11.6	10.5	11.1	10.8	11.0	11.0	9.6	5.8	6.6	7.0
Federal Bureau of Investigation	17.7	7.7	30.0	9.6	12.9	13.0	2.2	2.9	1.0	1.0
Office of Justice Programs	72.9	48.8	68.6	140.1	33.0	45.2	12.0	11.0	12.0	11.0
Department of Labor	11.8	20.1	14.9	12.3	12.5	8.0	3.1	3.3	2.8	2.8
Employee Benefits Security Administration	4.7	11.5	8.2	5.9	5.1	3.0	1.1	1.4	1.1	1.1
Occupational Safety and Health Administration	4.3	5.9	4.2	3.6	3.4	0.7	2.0	1.9	1.7	1.8
Pension Benefit Guaranty Corp.	2.8	2.7	2.6	2.9	4.1	4.3	0.0	0.0	NA	NA
Department of State	3.3	2.2	1.5	NA	2.0	2.0	2.1	62.1	62.2	62.3
Department of Transportation	786.3	740.2	681.4	806.2	718.8	748.5	716.2	661.1	706.6	747.1
Federal Aviation Administration	228.0	242.0	214.0	227.0	228.0	250.0	266.0	239.0	247.0	261.0
Federal Highway Administration	320.1	311.3	280.9	385.9	353.0	353.0	274.4	261.4	287.1	261.8
Federal Motor Carrier Safety Administration	6.9	6.7	6.9	7.5	7.6	10.6	11.7	10.3	7.1	9.1
Federal Railroad Administration	41.7	47.0	46.5	54.2	43.9	41.3	43.6	34.5	35.1	55.0
Federal Transit Administration	42.0	25.9	10.5	9.1	17.0	6.8	40.7	36.0	39.7	35.0
National Highway Traffic Safety Administration	116.0	82.6	95.0	93.0	46.0	49.0	55.0	53.0	64.0	57.0
Office of the Secretary of Transportation	17.9	13.9	15.6	13.9	11.5	18.5	11.4	16.4	8.5	22.2
Pipeline and Hazardous Materials Safety Administration	9.7	8.0	7.3	15.6	11.9	19.3	13.4	10.5	18.0	45.9
Research and Innovative Technology Administration	4.0	3.0	4.7	na	na	na	na	na	na	na
Department of the Treasury	77.6	75.6	74.1	76.4	66.5	85.2	10.5	37.7	48.8	48.9
Bureau of Engraving and Printing	5.8	5.0	9.4	9.4	9.5	18.8	9.2	37.7	46.4	48.5
Internal Revenue Service	70.8	69.0	64.5	64.4	53.7	64.6	0.0	0.0	0.0	0.0
U.S. Mint	1.0	1.6	0.1	2.6	3.4	1.8	1.3	0.0	2.5	0.4
Department of Veterans Affairs	558.9	614.8	639.0	608.3	612.1	583.1	594.1	644.0	685.0	757.0
Other agencies										
Administrative Office of the U.S. Courts	NA	NA	NA	NA	NA	6.8	8.0	6.8	6.4	7.7
Agency for International Development	119.2	77.4	125.5	59.9	212.2	192.8	192.2	166.6	220.6	220.6
Appalachian Regional Commission	0.4	0.6	0.5	0.6	0.6	0.4	0.6	0.6	0.6	0.5
Consumer Product Safety Commission	NA	2.0	1.3	1.8	2.0	2.0	1.9	1.0	0.9	0.2
Environmental Protection Agency	581.7	581.1	529.7	538.0	520.7	513.3	498.4	492.1	490.0	493.0
Federal Communications Commission	3.7	4.0	5.2	6.7	4.8	5.1	7.2	5.5	2.0	1.8
Federal Trade Commission	2.7	2.9	2.7	2.5	1.9	3.0	5.7	5.8	6.0	7.3
Library of Congress	1.3	1.0	1.0	1.0	1.1	1.6	1.8	3.3	1.9	2.7
National Aeronautics and Space Administration	7,723.7	10,595.9	11,330.5	11,261.8	12,360.4	12,012.9	10,615.7	10,852.4	13,338.2	13,011.4

TABLE 97

Federal outlays for research, development, and R&D plant, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
National Archives and Records Administration	3.1	2.0	1.1	0.9	0.7	0.7	0.5	0.5	0.5	0.0
National Science Foundation	5,748.0	5,740.0	5,703.0	5,666.0	5,474.0	5,468.0	5,650.0	5,664.0	5,741.0	5,944.0
Nuclear Regulatory Commission	99.0	81.0	85.0	90.6	70.8	86.0	67.4	77.7	74.9	65.3
Patient-Centered Outcomes Research Trust Fund	8.9	41.1	74.2	93.6	244.2	354.1	1,345.0	491.7	578.5	540.7
Smithsonian Institution	249.2	245.3	251.0	230.8	228.8	236.8	242.7	262.8	269.0	274.0
Social Security Administration	53.0	64.9	56.7	59.6	58.9	129.0	109.5	71.6	146.2	131.8
Tennessee Valley Authority	NA	NA	NA	NA	NA	NA	5.6	13.2	9.7	8.2
U.S. Agency for Global Media	NA	NA	NA	NA	NA	NA	NA	NA	6.1	6.2
U.S. Postal Service	NA	NA	NA	NA	28.0	29.4	73.3	53.2	26.7	26.6

na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had outlays in variables represented by this table appear in the table. Beginning with FY 2016, the totals reported for development outlays represent a refinement to this category by more narrowly defining it to be "experimental development." Most notably, totals for development do not include the Department of Defense (DOD) Budget Activity 7 (Operational Systems Development) outlays. Those funds, previously included in DOD's development outlay totals, support the development efforts to upgrade systems that have been fielded or have received approval for full-rate production and anticipate production funding in the current or subsequent fiscal year. Therefore, the data are not directly comparable with totals reported in previous years. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 98

Federal outlays for research and development, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All agencies	76,897.6	82,705.3	88,297.6	100,179.3	105,174.9	117,398.5	116,867.6	121,875.1	123,059.1	126,854.2	131,387.6
Departments											
Department of Agriculture	1,551.2	1,754.3	1,919.1	1,966.3	2,048.2	2,132.1	2,185.0	2,217.6	2,254.1	2,229.4	2,308.9
Agricultural Marketing Service	4.8	4.7	5.2	4.7	8.4	9.4	6.3	6.4	3.8	4.3	4.4
Agricultural Research Service	790.4	912.3	1,039.4	1,039.0	1,098.7	1,117.3	1,134.7	1,102.8	1,148.6	1,133.7	1,199.9
Animal and Plant Health Inspection Service	20.6	25.4	23.7	28.0	24.4	24.4	25.5	26.0	28.4	24.6	25.6
Economic Research Service	63.9	66.1	69.9	70.3	65.7	74.6	72.8	90.6	77.8	79.7	86.4
Food Safety and Inspection Service	2.3	2.6	NA	NA	NA	NA	NA	NA	NA	NA	NA
Foreign Agricultural Service	1.4	1.4	1.4	1.6	1.6	1.5	0.9	0.6	0.4	0.4	0.4
Forest Service	232.0	250.0	277.0	305.0	326.0	325.0	341.0	335.0	338.0	336.0	363.0
Grain Inspection, Packers, and Stockyards Administration	3.6	6.1	6.0	5.3	6.7	6.7	7.1	6.7	6.6	6.5	6.3
National Agricultural Statistics Service	3.6	4.3	4.6	5.5	6.1	6.1	6.5	6.8	6.9	7.2	7.5
National Institute of Food and Agriculture	425.4	478.9	487.6	503.1	506.8	563.5	586.0	621.8	639.3	634.0	611.7
Rural Business-Cooperative Service	3.1	2.4	4.2	3.8	3.8	3.6	4.1	21.0	4.2	3.0	3.7
Department of Commerce	1,065.6	966.5	1,113.7	1,155.2	1,076.4	707.7	664.2	991.1	1,052.1	1,004.4	1,121.6
Economic Development Administration	0.6	0.6	0.4	0.5	0.2	0.5	0.2	0.8	2.2	2.9	7.3
National Institute of Standards and Technology	412.8	424.9	413.3	459.2	508.8	440.6	421.1	422.2	444.1	454.5	534.6
National Oceanic and Atmospheric Administration	597.1	501.0	651.3	652.0	519.0	240.2	215.5	540.7	580.8	510.9	525.4
National Telecommunications and Information Administration	23.0	21.0	26.0	23.5	24.2	3.5	5.3	5.3	0.3	6.9	7.0
U.S. Census Bureau	32.0	19.0	22.7	19.9	24.2	23.0	22.0	22.0	24.7	29.0	47.2
Department of Defense	38,519.1	40,528.5	41,662.9	49,614.9	52,977.5	64,311.4	63,724.3	68,557.0	68,731.4	66,775.3	67,614.8
Defense agencies and activities	5,608.5	7,285.7	10,196.9	11,741.1	11,074.2	17,056.7	13,970.6	14,686.5	15,521.3	15,598.7	15,209.7
Department of the Air Force	18,817.0	17,589.5	14,156.3	18,146.2	19,711.8	20,915.1	21,407.2	24,483.0	24,121.7	23,458.2	26,106.2
Department of the Army	4,820.1	5,796.7	6,619.8	7,092.1	6,954.2	9,847.2	10,662.1	10,360.0	11,057.1	10,048.3	9,209.6
Department of the Navy	8,983.2	9,626.1	10,494.5	12,392.4	14,932.4	16,172.3	17,422.9	18,834.4	17,851.0	17,491.6	16,905.1
Operational Test and Evaluation, Director	32.9	205.3	195.5	243.1	305.0	320.1	261.6	193.1	180.3	178.5	184.2
Test and Evaluation, Deputy Under Secretary of Defense	257.4	25.3	na	na	na	na	na	na	na	na	na
Department of Education	222.4	251.0	243.1	315.6	226.9	264.3	254.5	271.2	286.8	312.0	321.7
Department of Energy	6,067.6	6,539.1	7,010.3	7,372.7	7,475.8	7,760.2	7,432.9	7,792.8	8,108.3	8,546.3	8,986.2
Advanced Research Projects Agency—Energy	na	na	na	na	na	na	na	na	0.0	0.0	63.8
Bonneville Power Administration	NA	NA	22.9	23.3	24.0	11.3	10.7	11.1	13.7	8.1	13.1
Civilian Radioactive Waste Management	NA	NA	62.5	75.8	74.1	74.1	52.9	10.5	8.4	1.7	0.0
Electricity Delivery and Energy Reliability	na	na	na	na	na	71.8	108.3	54.4	89.4	87.1	83.0
Energy Efficiency and Renewable Energy	na	NA	734.9	682.3	583.9	569.1	430.6	646.4	729.1	712.3	915.1
Environmental Management	NA	NA	160.3	69.4	42.8	49.8	34.0	32.0	35.8	13.1	69.9
Fossil Energy	NA	NA	471.3	639.8	499.5	532.7	365.6	418.6	306.3	343.8	349.7

TABLE 98

Federal outlays for research and development, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
National Nuclear Security Administration	NA	NA	3,299.4	3,448.3	3,579.4	3,624.9	3,547.6	3,589.5	3,730.5	3,488.9	3,488.8
Defense Programs	NA	NA	2,372.7	2,576.7	2,727.4	2,732.9	2,593.6	2,656.9	2,707.4	2,443.7	2,285.1
Fissile Materials Disposition	NA	NA	22.0	16.6	1.0	0.0	0.0	0.0	NA	NA	NA
Naval Nuclear Propulsion Program	NA	NA	639.3	631.5	687.8	746.6	710.7	727.8	724.1	730.1	866.1
Office of Defense Nuclear Nonproliferation	NA	NA	265.4	223.5	163.3	145.5	243.3	204.8	299.0	315.1	337.6
Nuclear Energy	NA	NA	28.2	43.0	79.3	82.8	89.0	80.9	133.1	116.0	368.1
Office of Intelligence	NA	NA	5.2	4.0	0.0	NA	NA	NA	NA	NA	NA
Office of Science	NA	NA	2,225.5	2,386.7	2,592.8	2,743.7	2,794.1	2,949.4	3,062.0	3,775.3	3,634.7
Department of Health and Human Services	18,187.1	21,002.4	23,647.8	26,499.3	27,834.6	28,432.3	28,440.6	29,009.6	29,121.0	35,144.2	34,927.8
Administration for Children and Families	25.4	26.4	21.7	19.4	18.7	38.6	13.4	11.8	19.2	13.7	6.5
Administration for Community Living	1.1	1.6	2.1	4.0	3.0	2.0	3.0	3.0	0.0	0.0	0.0
Agency for Healthcare Research and Quality	50.8	33.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agency for Toxic Substances and Disease Registry	14.7	13.1	12.4	14.3	10.7	9.5	9.0	4.2	4.3	4.5	2.8
Centers for Disease Control and Prevention	439.0	544.0	521.0	564.0	539.8	510.8	544.6	544.3	407.2	338.9	343.0
Centers for Medicare and Medicaid Services	44.4	53.0	72.9	73.6	89.0	89.0	62.4	86.0	69.8	57.4	53.9
Food and Drug Administration	141.2	149.4	119.4	149.5	127.5	136.9	138.0	124.6	132.9	159.1	188.4
Health Resources and Services Administration	35.6	51.0	54.1	439.2	47.4	52.9	23.6	23.2	61.6	56.3	66.3
National Institutes of Health	16,918.3	19,480.7	22,110.1	25,156.4	26,890.4	27,500.3	27,565.6	28,146.3	28,404.4	34,494.3	34,212.6
Office of the Secretary of Health and Human Services	18.7	15.6	16.5	21.7	21.1	24.8	26.8	24.5	21.5	20.0	54.4
Office of Public Health and Science	2.0	1.7	1.6	1.8	NA	NA	NA	NA	NA	NA	NA
Office of the Assistant Secretary for Planning and Evaluation	16.7	13.9	14.9	19.9	21.1	24.8	26.8	24.5	21.5	20.0	54.4
Substance Abuse and Mental Health Services Administration	497.8	634.3	717.6	57.2	87.2	67.6	54.3	41.8	0.0	0.0	NA
Department of Homeland Security	na	na	na	NA	535.9	966.4	1,592.7	922.3	798.8	92.2	583.1
Science and Technology Directorate	na	na	na	NA	377.0	774.5	1,556.1	894.5	783.0	72.6	557.2
Transportation Security Administration	na	na	na	NA	137.9	180.5	12.2	3.8	0.0	0.0	NA
U.S. Coast Guard	na	na	na	NA	20.1	10.4	23.4	23.1	15.1	19.5	25.9
U.S. Secret Service	na	na	na	NA	1.0	1.0	1.0	0.8	0.7	NA	NA
Department of Housing and Urban Development	43.7	64.2	57.7	54.3	43.2	47.9	42.0	32.5	32.5	36.4	50.5
Department of the Interior	579.8	621.1	631.1	597.4	604.6	589.7	602.3	615.9	635.3	738.0	720.0
Bureau of Ocean Energy Management, Regulation and Enforcement	29.1	25.9	29.6	27.4	27.2	27.2	28.1	25.8	31.6	37.1	41.7
Bureau of Reclamation	9.8	9.7	10.4	9.5	10.9	12.7	8.8	8.5	8.9	12.7	9.7
National Park Service	34.7	12.9	26.2	10.3	14.3	3.5	3.8	7.7	8.5	14.1	7.6
U.S. Geological Survey	506.1	572.6	565.0	550.2	552.2	546.2	561.5	573.8	586.4	674.1	661.1
Department of Justice	42.8	67.4	67.7	103.2	68.7	66.1	71.4	123.9	111.9	103.4	118.6
Bureau of Prisons	6.6	12.0	8.7	9.7	9.4	12.5	12.1	12.7	10.6	10.5	10.8

TABLE 98

Federal outlays for research and development, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Federal Bureau of Investigation	10.0	19.0	33.6	42.8	34.0	33.5	34.3	70.8	26.1	14.5	30.0
Immigration and Naturalization Service	0.6	0.9	0.0	na	na	na	na	na	na	na	na
Office of Justice Programs	25.7	35.5	25.4	50.7	25.3	20.1	25.0	40.4	75.2	78.4	77.8
Department of Labor	82.7	95.5	164.6	176.4	198.2	162.9	94.3	58.8	83.8	71.0	11.9
Bureau of Labor Statistics	12.3	21.5	20.7	20.6	22.4	22.5	22.8	23.7	24.2	0.0	NA
Employee Benefits Security Administration	1.8	1.3	0.9	2.1	1.3	1.3	1.6	0.8	1.1	1.1	4.5
Employment and Training Administration	60.9	60.9	137.1	148.0	170.1	133.7	64.1	29.4	53.7	64.2	NA
Occupational Safety and Health Administration	5.7	5.7	3.8	3.1	3.3	3.4	3.5	2.9	3.0	3.8	4.8
Office of the Secretary of Labor	1.3	5.4	1.2	1.8	0.2	0.4	0.3	0.3	0.0	0.0	0.0
Pension Benefit Guaranty Corp.	0.7	0.7	0.7	0.9	0.9	1.6	1.9	1.8	1.8	1.9	2.6
Department of State	0.9	1.6	1.6	1.6	2.3	2.6	3.4	3.0	3.0	3.7	2.9
Department of Transportation	436.7	510.6	681.5	584.6	554.6	396.3	866.2	755.5	606.9	525.6	760.5
Federal Aviation Administration	217.6	199.0	295.0	244.0	248.0	226.0	290.0	264.0	201.0	180.0	239.0
Federal Highway Administration	106.7	201.9	209.0	230.0	238.1	73.9	400.1	339.9	259.7	214.9	352.4
Federal Motor Carrier Safety Administration	0.4	5.5	2.0	2.9	4.3	6.6	4.2	12.7	6.6	6.9	6.9
Federal Railroad Administration	25.3	20.4	27.3	26.5	31.8	22.0	57.6	34.7	37.8	39.7	44.0
Federal Transit Administration	12.0	3.7	2.3	3.8	4.4	4.2	6.5	4.0	7.0	6.9	21.7
National Highway Traffic Safety Administration	40.5	46.7	47.1	50.7	7.0	31.7	75.0	66.0	58.7	44.3	64.6
Office of the Secretary of Transportation	7.5	7.0	11.1	15.7	11.0	28.8	15.6	16.2	15.9	19.5	20.3
Pipeline and Hazardous Materials Safety Administration	na	na	na	na	10.0	2.2	15.2	15.9	13.3	4.5	7.6
Research and Innovative Technology Administration	na	na	na	na	0.0	1.0	2.0	2.0	7.0	9.0	4.0
Research and Special Programs Administration	7.0	7.5	9.0	11.0	na	na	na	na	na	na	na
Transportation Security Administration	na	na	59.0	na	na	na	na	na	na	na	na
U.S. Coast Guard	19.8	19.0	19.7	na	na	na	na	na	na	na	na
Department of the Treasury	60.3	65.1	70.7	60.0	62.4	66.4	65.1	63.6	65.5	68.5	68.5
Bureau of Engraving and Printing	2.8	4.7	7.1	4.9	4.2	6.2	6.0	5.3	5.3	3.0	1.2
Internal Revenue Service	53.3	56.6	55.5	54.4	57.3	57.8	55.4	54.8	59.6	64.9	66.3
Office of Thrift Supervision	0.1	0.1	0.1	0.0	NA	NA	NA	NA	NA	NA	NA
U.S. Customs Service	1.8	2.2	7.1	na	na	na	na	na	na	na	na
U.S. Mint	1.3	0.8	*	0.7	1.0	2.4	3.7	3.5	0.6	0.7	1.1
U.S. Secret Service	1.0	0.7	0.8	na	na	na	na	na	na	na	na
Department of Veterans Affairs	341.7	345.0	328.8	365.4	405.2	402.0	411.6	446.1	479.6	510.0	581.0
Other agencies											
Agency for International Development	179.0	195.0	202.0	220.0	254.0	260.4	255.0	234.5	123.8	156.2	168.7
Appalachian Regional Commission	0.6	0.7	0.7	0.7	0.6	0.7	0.7	0.6	0.6	1.0	0.6
Consumer Product Safety Commission	0.0	0.1	0.0	0.0	NA	NA	NA	NA	NA	NA	NA

TABLE 98

Federal outlays for research and development, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Environmental Protection Agency	472.0	520.0	561.0	550.0	0.2	0.5	0.2	0.5	532.0	552.8	594.7
Federal Communications Commission	2.8	2.7	4.4	4.5	8.5	8.8	7.6	8.5	6.7	7.0	3.7
Federal Trade Commission	0.7	0.7	1.8	2.3	1.6	1.2	1.6	1.5	2.6	2.4	3.0
Library of Congress	2.2	1.8	2.8	3.0	1.2	6.3	7.4	12.0	1.4	0.8	1.2
National Aeronautics and Space Administration	6,424.0	6,444.0	6,945.0	7,124.1	7,165.5	6,959.4	6,197.4	5,918.6	5,999.6	5,739.1	7,316.0
National Archives and Records Administration	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	4.6	4.6	4.6
National Science Foundation	2,446.0	2,566.0	2,803.0	3,235.0	3,439.0	3,657.0	3,707.0	3,569.0	3,781.0	3,937.0	4,809.0
Nuclear Regulatory Commission	47.0	40.0	47.0	38.0	55.0	57.0	59.0	58.8	41.7	74.0	81.0
Smithsonian Institution	93.0	93.0	101.0	98.0	103.0	104.0	113.0	142.0	140.0	151.0	164.0
Social Security Administration	28.8	28.9	27.9	36.8	30.4	35.1	67.8	68.2	54.1	67.9	63.0
U.S. Agency for Global Media	0.1	*	0.3	0.0	1.2	*	0.2	NA	NA	NA	NA

* = amount greater than \$0 but less than \$50,000. na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had outlays in variables represented by this table appear in the table. FYs 2009 and 2010 outlays include additional funding provided by the American Recovery and Reinvestment Act of 2009. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 99

Federal outlays for research and development, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
All agencies	131,451.9	128,559.8	127,224.8	128,476.5	128,089.9	109,551.8	110,000.2	117,072.2	124,854.5	136,453.3
Departments										
Department of Agriculture	2,300.5	2,290.2	2,231.9	2,320.7	2,320.3	2,411.5	2,329.8	2,308.1	2,497.8	3,204.4
Agricultural Marketing Service	4.3	4.3	5.0	5.7	6.8	6.7	7.2	7.2	7.7	7.0
Agricultural Research Service	1,161.5	1,095.0	1,071.2	1,025.4	1,077.2	1,118.3	1,148.8	1,101.3	1,149.6	1,372.0
Animal and Plant Health Inspection Service	24.6	31.8	31.3	37.1	34.2	39.1	39.1	38.5	39.1	39.1
Economic Research Service	87.9	80.2	78.6	77.0	74.4	94.4	81.5	86.6	82.2	87.0
Foreign Agricultural Service	0.6	0.7	0.7	0.2	0.6	0.2	0.2	0.0	0.0	0.5
Forest Service	353.0	355.0	342.0	330.0	336.0	336.0	334.0	327.0	323.0	412.0
Grain Inspection, Packers, and Stockyards Administration	6.7	5.0	4.7	5.7	6.0	6.0	0.2	na	na	na
National Agricultural Statistics Service	7.4	7.4	7.5	9.4	9.3	9.3	9.4	9.5	9.5	9.0
National Institute of Food and Agriculture	653.8	706.8	688.0	824.4	772.3	798.0	706.1	735.3	884.0	1,275.0
Rural Business-Cooperative Service	0.7	3.9	3.0	5.8	3.5	3.6	3.3	2.8	2.8	2.8
Department of Commerce	1,267.0	1,112.1	1,081.7	1,266.7	1,220.7	1,330.4	1,526.5	1,414.6	1,521.9	1,554.6
Economic Development Administration	0.6	NA	NA	NA	NA	NA	NA	NA	NA	NA
National Institute of Standards and Technology	570.6	570.2	524.1	553.2	606.9	644.7	644.4	670.5	703.4	708.6
National Oceanic and Atmospheric Administration	629.0	432.8	418.6	504.4	461.0	505.0	653.7	627.0	714.0	717.0
National Telecommunications and Information Administration	7.2	7.4	7.8	7.9	11.3	10.3	8.1	7.3	8.9	9.2
U.S. Census Bureau	59.5	101.7	131.3	201.2	141.6	170.4	220.3	109.9	95.6	119.8
Department of Defense	72,527.4	65,252.9	65,019.6	63,509.3	62,100.4	42,700.4	41,292.2	44,843.2	48,135.3	54,317.2
Defense Advanced Research Projects Agency	2,889.3	2,833.3	2,692.2	2,807.7	2,832.5	2,870.6	2,877.1	2,996.0	3,253.7	3,403.7
Department of the Air Force	25,854.5	25,042.8	24,789.7	23,204.7	23,322.8	7,137.3	7,439.3	11,014.9	11,830.4	14,931.2
Department of the Army	8,125.0	6,688.5	7,816.8	7,653.1	7,306.3	6,800.4	6,911.1	7,011.3	9,293.2	10,203.4
Department of the Navy	15,345.4	14,363.0	15,487.4	15,437.3	14,669.0	15,166.4	14,397.6	12,522.6	10,902.7	11,985.6
Other defense agencies	20,313.3	16,325.4	14,233.4	14,406.5	13,969.8	10,725.8	9,667.2	11,298.4	12,855.2	13,793.3
Department of Education	105.7	101.6	97.2	344.8	318.0	212.2	245.8	235.3	226.4	203.0
Department of Energy	9,685.0	9,599.3	9,302.1	10,364.2	11,303.4	11,855.3	12,019.6	14,606.7	13,656.5	16,157.5
Advanced Research Projects Agency—Energy	118.4	142.4	143.6	187.2	245.2	237.9	269.2	250.9	247.1	352.1
Bonneville Power Administration	13.2	14.5	0.0	16.0	15.6	15.6	14.0	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	89.5	101.1	45.3	73.1	107.6	91.7	133.0	103.8	144.2	146.8
Energy Efficiency and Renewable Energy	852.6	909.8	704.9	960.5	1,043.1	1,142.1	1,280.0	1,341.0	1,451.2	1,679.5
Environmental Management	67.5	45.8	9.1	23.2	24.2	22.8	28.7	38.0	29.3	31.4
Fossil Energy	288.4	285.7	360.4	425.6	631.9	624.5	620.3	661.6	659.0	680.0
National Nuclear Security Administration	4,033.9	3,919.8	3,855.7	4,312.2	4,221.9	4,544.8	4,636.1	4,025.5	5,477.1	7,466.5
Defense Programs	2,768.7	2,648.2	2,568.1	2,921.5	2,925.9	2,980.1	3,167.0	2,536.7	3,359.5	5,425.2
Naval Nuclear Propulsion Program	941.7	1,040.1	994.0	1,093.7	1,083.4	1,215.7	1,220.0	1,172.8	1,788.6	1,648.4

TABLE 99

Federal outlays for research and development, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
Office of Defense Nuclear Nonproliferation	323.5	231.5	293.6	297.0	212.7	348.9	249.0	316.0	329.0	393.0
Nuclear Energy	387.8	361.2	263.4	323.9	760.4	832.6	811.1	846.0	1,109.5	631.3
Office of Cybersecurity, Energy Security, and Emergency Response	na	na	na	na	na	na	na	0.0	36.3	67.4
Office of Science	3,833.6	3,819.1	3,919.7	4,042.4	4,253.3	4,343.4	4,227.3	7,340.0	4,502.9	5,102.5
Department of Health and Human Services	30,379.4	30,721.0	29,282.5	30,403.9	29,497.0	29,522.1	31,168.6	32,997.0	35,270.7	37,604.0
Administration for Children and Families	9.3	8.1	2.6	2.6	2.5	3.0	2.0	1.3	2.4	1.6
Administration for Community Living	0.0	0.0	0.0	0.0	76.0	83.1	83.3	82.7	83.1	90.2
Agency for Healthcare Research and Quality	0.0	0.0	365.0	364.0	364.0	334.0	324.0	334.0	338.0	338.0
Agency for Toxic Substances and Disease Registry	5.1	1.4	1.1	1.4	1.8	2.2	2.8	2.8	7.0	7.0
Biomedical Advanced Research and Development Authority	NA	NA	NA	NA	NA	NA	NA	NA	280.8	16.9
Centers for Disease Control and Prevention	296.5	445.3	300.5	198.0	275.3	198.0	208.0	200.1	187.2	181.6
Centers for Medicare and Medicaid Services	45.2	33.8	20.0	33.6	24.0	29.5	29.8	230.7	5.8	5.8
Food and Drug Administration	206.4	315.7	322.8	348.3	336.3	455.3	435.0	427.5	443.7	445.5
Health Resources and Services Administration	36.8	20.3	36.6	37.8	41.1	41.0	45.8	33.7	26.6	19.4
National Institutes of Health	29,760.2	29,876.8	28,215.3	29,399.6	28,358.0	28,358.0	30,021.0	31,667.0	33,879.0	36,481.0
Office of the Secretary of Health and Human Services	19.9	19.5	18.6	18.6	18.0	18.0	16.9	17.1	17.0	17.0
Office of the Assistant Secretary for Planning and Evaluation	19.9	19.5	18.6	18.6	18.0	18.0	16.9	17.1	17.0	17.0
Department of Homeland Security	471.4	593.4	334.9	448.0	475.8	538.4	840.7	862.2	863.2	813.5
Countering Weapons of Mass Destruction Office	NA	NA	NA	73.5	71.3	63.0	69.3	64.9	81.4	47.7
Cybersecurity and Infrastructure Security Agency	na	na	na	na	na	na	na	7.2	13.1	14.4
Science and Technology Directorate	450.9	572.7	314.0	350.5	380.0	454.4	750.6	752.2	724.0	715.0
Transportation Security Administration	NA	NA	NA	NA	NA	NA	NA	20.2	20.6	22.9
U.S. Coast Guard	20.5	20.7	20.8	24.0	24.5	20.9	20.9	16.5	22.1	1.2
U.S. Secret Service	NA	NA	NA	NA	NA	NA	NA	1.2	1.9	12.2
Department of Housing and Urban Development	50.1	53.5	63.8	66.7	56.0	74.7	71.0	70.5	63.0	64.0
Department of the Interior	705.4	738.7	698.3	739.4	805.4	856.8	861.2	750.8	800.7	837.4
Bureau of Indian Affairs	NA	NA	NA	NA	NA	NA	NA	5.0	5.0	5.0
Bureau of Land Management	NA	NA	NA	NA	16.4	18.0	18.0	20.8	20.8	20.8
Bureau of Ocean Energy Management	na	39.0	30.5	48.0	50.0	73.0	73.1	77.4	73.3	69.6
Bureau of Ocean Energy Management, Regulation and Enforcement	44.8	na	na	na	na	na	na	na	na	na
Bureau of Reclamation	11.5	10.0	10.1	12.0	9.8	20.9	27.4	23.4	23.2	36.4
Bureau of Safety and Environmental Enforcement	na	11.6	14.4	14.8	23.3	26.8	21.4	5.6	12.5	13.3
National Park Service	9.2	5.3	7.0	15.2	8.3	8.7	9.5	0.8	0.9	0.9
Office of Surface Mining Reclamation and Enforcement	NA	NA	NA	NA	NA	NA	NA	1.1	1.0	0.8

TABLE 99

Federal outlays for research and development, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
U.S. Fish and Wildlife Service	NA	NA	NA	NA	31.9	32.5	24.0	24.0	24.0	25.8
U.S. Geological Survey	640.0	672.8	636.3	649.5	665.8	676.9	687.8	592.6	640.2	664.8
Department of Justice	102.3	67.0	109.7	160.5	56.9	69.1	23.8	19.7	19.6	19.1
Bureau of Prisons	11.6	10.5	11.1	10.8	11.0	11.0	9.6	5.8	6.6	7.0
Federal Bureau of Investigation	17.7	7.7	30.0	9.6	12.9	13.0	2.2	2.9	1.0	1.0
Office of Justice Programs	72.9	48.8	68.6	140.1	33.0	45.2	12.0	11.0	12.0	11.0
Department of Labor	10.5	18.8	14.7	12.3	12.5	8.0	3.1	3.3	2.8	2.8
Employee Benefits Security Administration	4.7	11.5	8.2	5.9	5.1	3.0	1.1	1.4	1.1	1.1
Occupational Safety and Health Administration	3.0	4.6	3.9	3.6	3.4	0.7	2.0	1.9	1.7	1.8
Pension Benefit Guaranty Corp.	2.8	2.7	2.6	2.9	4.1	4.3	0.0	0.0	NA	NA
Department of State	3.3	2.2	1.5	NA	2.0	2.0	2.1	62.1	62.2	62.3
Department of Transportation	768.5	719.2	659.8	786.1	697.2	719.0	681.6	629.9	668.9	710.3
Federal Aviation Administration	211.0	224.0	198.0	209.0	209.0	223.0	234.0	209.0	211.0	226.0
Federal Highway Administration	320.1	311.3	280.9	385.9	353.0	353.0	274.4	261.4	287.1	261.8
Federal Motor Carrier Safety Administration	6.9	6.7	6.9	7.5	7.6	10.6	11.7	10.3	7.1	9.1
Federal Railroad Administration	40.9	43.9	40.9	52.1	41.3	38.9	41.1	33.3	33.4	53.3
Federal Transit Administration	42.0	25.9	10.5	9.1	17.0	6.8	40.7	36.0	39.7	35.0
National Highway Traffic Safety Administration	116.0	82.6	95.0	93.0	46.0	49.0	55.0	53.0	64.0	57.0
Office of the Secretary of Transportation	17.9	13.9	15.6	13.9	11.5	18.5	11.4	16.4	8.5	22.2
Pipeline and Hazardous Materials Safety Administration	9.7	8.0	7.3	15.6	11.9	19.3	13.4	10.5	18.0	45.9
Research and Innovative Technology Administration	4.0	3.0	4.7	na	na	na	na	na	na	na
Department of the Treasury	77.6	75.6	74.1	76.4	66.5	85.2	10.5	37.7	44.7	47.7
Bureau of Engraving and Printing	5.8	5.0	9.4	9.4	9.5	18.8	9.2	37.7	44.5	47.5
Internal Revenue Service	70.8	69.0	64.5	64.4	53.7	64.6	0.0	0.0	0.0	0.0
U.S. Mint	1.0	1.6	0.1	2.6	3.4	1.8	1.3	0.0	0.2	0.2
Department of Veterans Affairs	558.9	614.8	639.0	608.3	612.1	583.1	594.1	644.0	685.0	757.0
Other agencies										
Administrative Office of the U.S. Courts	NA	NA	NA	NA	NA	6.8	8.0	6.8	6.4	7.7
Agency for International Development	119.2	77.4	125.5	59.9	212.2	192.8	192.2	166.6	220.6	220.6
Appalachian Regional Commission	0.4	0.6	0.5	0.6	0.6	0.4	0.6	0.6	0.6	0.5
Consumer Product Safety Commission	NA	2.0	1.3	1.8	2.0	2.0	1.9	1.0	0.9	0.2
Environmental Protection Agency	577.0	576.3	522.8	530.9	515.6	508.0	493.6	487.4	485.3	488.5
Federal Communications Commission	3.7	4.0	5.2	6.7	4.8	5.1	7.2	5.5	2.0	1.8
Federal Trade Commission	2.7	2.9	2.7	2.5	1.9	3.0	5.7	5.8	6.0	7.3
Library of Congress	1.3	1.0	1.0	1.0	1.1	1.6	1.8	3.3	1.9	2.7
National Aeronautics and Space Administration	6,145.5	10,427.0	11,265.4	11,128.1	12,150.2	11,936.7	10,528.0	10,765.1	13,260.0	12,935.2

TABLE 99

Federal outlays for research and development, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
National Archives and Records Administration	3.1	2.0	1.1	0.9	0.7	0.7	0.5	0.5	0.5	0.0
National Science Foundation	5,233.0	5,124.0	5,269.0	5,198.0	5,059.0	5,120.0	5,279.0	5,207.0	5,273.0	5,414.0
Nuclear Regulatory Commission	99.0	81.0	85.0	90.6	70.8	86.0	67.4	77.7	74.9	65.3
Patient-Centered Outcomes Research Trust Fund	8.9	41.1	74.2	93.6	244.2	354.1	1,345.0	491.7	578.5	540.7
Smithsonian Institution	192.2	195.3	204.0	194.8	195.6	207.8	210.0	230.1	236.4	241.4
Social Security Administration	53.0	64.9	56.7	59.6	58.9	129.0	109.5	71.6	146.2	131.8
Tennessee Valley Authority	NA	NA	NA	NA	NA	NA	5.6	13.2	9.7	8.2
U.S. Agency for Global Media	NA	NA	NA	NA	NA	NA	NA	NA	6.1	6.2
U.S. Postal Service	NA	NA	NA	NA	28.0	29.4	73.3	53.2	26.7	26.6

na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level in that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had outlays in variables represented by this table appear in the table. Beginning with FY 2016, the totals reported for development outlays represent a refinement to this category by more narrowly defining it to be "experimental development." Most notably, totals for development do not include the Department of Defense (DOD) Budget Activity 7 (Operational Systems Development) outlays. Those funds, previously included in DOD's development outlay totals, support the development efforts to upgrade systems that have been fielded or have received approval for full-rate production and anticipate production funding in the current or subsequent fiscal year. Therefore, the data are not directly comparable with totals reported in previous years. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 100

Federal outlays for R&D plant, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All agencies	4,269.7	4,356.5	4,388.3	4,157.9	3,855.6	3,831.6	2,041.0	2,123.3	2,066.2	2,824.5	6,135.5
Departments											
Department of Agriculture	108.4	115.2	107.0	77.1	113.2	149.4	184.5	216.0	147.7	74.3	125.8
Agricultural Research Service	96.4	102.2	92.0	61.1	94.2	131.4	171.0	191.0	126.8	42.8	55.9
Forest Service	12.0	13.0	15.0	16.0	19.0	18.0	13.5	25.0	20.9	31.5	69.8
Department of Commerce	20.7	49.4	118.9	93.1	80.2	39.8	46.0	68.2	113.8	248.1	287.7
Economic Development Administration	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.5	25.4	26.5
National Institute of Standards and Technology	20.7	49.3	118.9	77.3	49.2	37.9	46.0	35.3	49.1	46.7	101.9
National Oceanic and Atmospheric Administration	0.0	0.1	0.0	15.7	31.0	1.9	0.0	33.0	46.2	176.0	159.3
Department of Defense	40.0	61.6	369.4	237.2	187.7	210.2	93.3	151.7	130.4	195.9	148.3
Defense agencies and activities	2.8	2.2	282.3	137.9	66.6	77.1	34.8	36.3	38.5	8.2	0.3
Department of the Air Force	2.4	9.8	5.4	6.8	9.7	35.7	38.7	15.1	91.9	111.2	128.8
Department of the Army	1.7	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	76.5	0.0
Department of the Navy	33.1	49.3	81.6	92.5	111.5	97.4	19.8	100.3	0.0	0.0	19.2
Department of Energy	806.7	876.5	1,024.3	1,051.8	1,025.9	846.8	780.3	651.3	748.3	1,224.5	904.4
Energy Efficiency and Renewable Energy	na	NA	4.9	6.2	19.8	24.8	26.1	1.8	64.9	17.2	53.4
Fossil Energy	NA	NA	9.3	2.9	6.0	6.1	20.5	12.0	18.7	14.8	14.8
National Nuclear Security Administration	NA	NA	412.4	446.8	425.9	300.1	310.5	204.6	268.8	172.1	280.3
Defense Programs	NA	NA	397.3	419.9	407.8	268.4	271.6	171.0	232.0	132.0	201.3
Naval Nuclear Propulsion Program	NA	NA	15.1	26.8	18.2	31.7	38.9	33.6	36.8	40.1	79.0
Office of Science	NA	NA	597.8	596.0	574.3	515.8	423.2	432.8	395.9	1,020.4	555.9
Department of Health and Human Services	219.7	294.3	244.3	817.1	428.6	429.4	358.8	251.7	147.4	151.4	1,682.4
Centers for Disease Control and Prevention	0.0	0.0	0.0	0.0	0.0	0.0	143.9	134.4	6.5	0.0	0.0
Food and Drug Administration	2.6	3.0	10.2	8.6	6.5	3.1	1.8	5.6	5.1	4.8	12.6
Health Resources and Services Administration	0.6	0.6	0.6	0.3	0.6	0.5	0.6	0.6	0.6	0.1	0.6
National Institutes of Health	216.5	290.6	233.4	808.2	421.4	425.7	212.6	111.1	135.1	146.5	1,669.1
Department of Homeland Security	na	na	na	NA	56.3	61.2	121.2	259.0	210.5	346.2	392.9
Science and Technology Directorate	na	na	na	NA	55.3	60.2	120.9	258.5	210.0	344.7	391.8
U.S. Coast Guard	na	na	na	NA	1.0	1.0	0.3	0.6	0.5	1.5	1.1
Department of the Interior	1.4	2.1	2.1	3.6	7.6	7.3	5.3	9.8	9.1	6.8	5.6
Bureau of Ocean Energy Management, Regulation and Enforcement	1.4	2.1	2.1	2.1	2.3	2.7	3.1	2.9	2.7	2.3	2.0
Bureau of Reclamation	0.0	0.0	0.0	1.5	5.3	4.6	2.2	7.0	6.3	4.6	3.6
Department of Justice	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Office of Justice Programs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Department of Labor	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.6	0.7	1.1
Occupational Safety and Health Administration	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.6	0.7	1.1

TABLE 100

Federal outlays for R&D plant, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Department of Transportation	12.9	4.8	51.4	7.3	14.8	15.8	18.1	19.9	18.9	18.9	20.5
Federal Aviation Administration	12.6	4.0	14.0	6.0	14.0	15.0	17.0	18.0	17.0	17.0	19.0
Federal Railroad Administration	0.0	0.6	1.1	1.3	0.8	0.8	1.1	1.9	1.9	1.9	1.5
Transportation Security Administration	na	na	36.0	na	na	na	na	na	na	na	na
U.S. Coast Guard	0.3	0.3	0.3	na	na	na	na	na	na	na	na
Department of the Treasury	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Customs Service	0.1	0.0	0.0	na	na	na	na	na	na	na	na
Department of Veterans Affairs	0.3	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.0	0.0
Other agencies											
Environmental Protection Agency	20.0	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
General Services Administration	0.1	0.6	*	0.0	0.0	0.0	0.0	NA	NA	NA	NA
National Aeronautics and Space Administration	2,867.0	2,723.0	2,197.0	1,595.8	1,580.8	1,697.3	12.2	11.7	72.2	75.8	1,564.9
National Science Foundation	170.0	196.0	271.0	272.0	357.0	368.0	395.0	453.0	424.0	433.0	949.0
Smithsonian Institution	2.5	2.5	2.5	2.5	3.0	6.0	26.0	30.0	42.0	49.0	53.0

* = amount greater than \$0 but less than \$50,000. na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had outlays in variables represented by this table appear in the table. FYs 2009 and 2010 outlays include additional funding provided by the American Recovery and Reinvestment Act of 2009. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 101

Federal outlays for R&D plant, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
All agencies	4,300.8	2,470.5	1,859.5	2,243.9	2,405.1	2,228.1	3,222.6	3,844.0	5,015.9	5,713.6
Departments										
Department of Agriculture	119.0	69.6	24.5	19.1	18.4	20.4	15.2	38.5	48.9	109.0
Agricultural Research Service	102.0	58.1	15.0	9.7	8.5	5.3	5.7	22.8	39.3	107.0
Forest Service	17.0	9.8	7.9	7.5	7.9	13.0	9.3	15.6	9.6	2.0
Grain Inspection, Packers, and Stockyards Administration	0.0	1.7	1.6	1.9	2.0	2.0	0.2	na	na	na
Department of Commerce	322.7	290.2	179.8	179.9	196.4	211.5	183.5	292.0	385.7	343.2
Economic Development Administration	14.9	NA	NA	NA	NA	NA	NA	NA	NA	NA
National Institute of Standards and Technology	171.1	149.7	51.7	50.6	64.4	61.5	64.2	75.0	132.7	151.2
National Oceanic and Atmospheric Administration	136.7	140.6	128.1	129.3	132.0	150.0	119.3	217.0	253.0	192.0
Department of Defense	131.9	138.7	87.1	137.1	150.3	167.8	919.6	394.7	353.3	331.2
Department of the Air Force	115.6	135.7	67.8	111.3	118.8	122.3	161.2	179.1	205.1	203.0
Department of the Army	0.0	0.0	0.0	0.0	0.0	5.0	719.9	0.0	0.0	0.0
Department of the Navy	16.4	1.5	18.3	19.2	23.8	28.9	29.7	38.3	126.3	117.2
Other defense agencies	0.0	1.6	1.0	6.6	7.7	11.6	8.8	177.4	21.9	11.0
Department of Energy	771.3	714.3	558.6	669.3	992.0	997.9	1,167.6	2,065.4	3,236.6	3,849.5
Bonneville Power Administration	0.0	0.0	14.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Energy Efficiency and Renewable Energy	35.9	0.0	16.1	3.6	4.2	2.9	3.6	208.0	1,738.4	1,953.4
Fossil Energy	14.8	12.4	16.0	16.0	18.0	0.0	15.8	21.3	23.0	29.0
National Nuclear Security Administration	151.6	92.8	74.8	81.6	292.7	261.7	289.6	298.6	275.4	281.5
Defense Programs	119.1	52.9	74.7	59.8	137.6	101.9	89.5	189.3	275.4	272.5
Naval Nuclear Propulsion Program	32.5	39.9	0.1	21.8	155.1	159.8	200.1	109.2	0.0	0.0
Office of Defense Nuclear Nonproliferation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0
Nuclear Energy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.0
Office of Science	569.0	609.1	437.4	568.1	677.1	733.3	858.7	1,537.6	1,199.9	1,559.6
Department of Health and Human Services	79.2	155.1	148.3	160.4	127.2	141.2	217.2	221.7	156.0	223.0
Centers for Medicare and Medicaid Services	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*	0.0
Food and Drug Administration	8.5	21.2	21.7	23.4	22.6	30.6	29.2	28.7	26.0	35.0
Health Resources and Services Administration	0.6	0.6	0.7	0.7	0.7	0.7	0.0	0.0	0.0	0.0
National Institutes of Health	70.1	133.2	126.0	136.3	104.0	110.0	188.0	193.0	130.0	188.0
Department of Homeland Security	694.3	234.5	279.2	407.7	228.3	193.2	185.5	215.1	206.3	170.0
Science and Technology Directorate	693.1	233.3	278.0	406.5	227.0	191.9	184.2	213.9	205.0	170.0
U.S. Coast Guard	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	0.0
Department of the Interior	8.4	5.8	6.9	5.5	7.2	8.2	3.2	3.6	3.7	6.3
Bureau of Ocean Energy Management, Regulation and Enforcement	4.8	na	na	na	na	na	na	na	na	na
Bureau of Reclamation	3.7	2.1	3.0	2.2	2.9	1.2	1.2	1.2	1.2	1.2

TABLE 101

Federal outlays for R&D plant, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
Bureau of Safety and Environmental Enforcement	na	3.8	3.9	3.4	4.3	7.1	2.0	2.4	2.6	5.2
Department of Labor	1.3	1.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Occupational Safety and Health Administration	1.3	1.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Transportation	17.9	21.1	21.6	20.1	21.6	29.4	34.5	31.2	37.7	36.8
Federal Aviation Administration	17.0	18.0	16.0	18.0	19.0	27.0	32.0	30.0	36.0	35.0
Federal Railroad Administration	0.9	3.1	5.6	2.1	2.6	2.4	2.5	1.2	1.7	1.8
Department of the Treasury	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	1.3
Bureau of Engraving and Printing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.0
U.S. Mint	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.3
Other agencies										
Environmental Protection Agency	4.7	4.9	7.0	7.1	5.1	5.3	4.8	4.7	4.7	4.5
National Aeronautics and Space Administration	1,578.2	168.9	65.2	133.8	210.2	76.1	87.7	87.3	78.2	76.2
National Science Foundation	515.0	616.0	434.0	468.0	415.0	348.0	371.0	457.0	468.0	530.0
Smithsonian Institution	57.0	50.0	47.0	36.0	33.2	29.0	32.7	32.7	32.6	32.6

* = amount greater than \$0 but less than \$50,000. na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had outlays in variables represented by this table appear in the table. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 102

Federal obligations for research, development, and R&D plant, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All agencies	80,403.2	88,562.4	98,013.3	107,794.2	116,068.6	122,619.6	123,854.7	129,431.2	129,049.9	144,758.1	146,967.8
Departments											
Department of Agriculture	1,833.5	2,076.0	2,090.6	2,136.0	2,281.6	2,318.6	2,386.2	2,372.3	2,246.0	2,344.7	2,615.4
Agricultural Marketing Service	5.1	4.8	5.2	4.8	9.0	7.9	6.3	6.4	5.0	4.3	4.4
Agricultural Research Service	959.3	1,098.3	1,163.6	1,143.2	1,258.6	1,226.8	1,294.0	1,240.9	1,145.6	1,187.2	1,359.6
Animal and Plant Health Inspection Service	20.6	25.4	23.7	28.0	24.4	24.4	25.5	26.0	28.4	28.9	30.1
Economic Research Service	64.2	65.6	67.0	68.4	70.8	74.0	75.0	92.0	77.8	78.9	86.4
Food Safety and Inspection Service	2.3	2.6	NA	NA	NA	NA	NA	NA	NA	NA	NA
Foreign Agricultural Service	1.4	1.4	1.4	1.6	1.6	1.5	0.9	0.6	0.4	0.4	0.4
Forest Service	235.0	250.0	268.0	307.2	314.9	315.9	321.6	345.3	315.9	375.7	426.3
Grain Inspection, Packers, and Stockyards Administration	3.6	6.1	6.0	5.3	6.7	6.7	7.1	6.7	6.6	6.5	6.3
National Agricultural Statistics Service	3.9	4.2	4.6	5.5	6.1	6.1	6.5	6.8	6.9	7.2	7.5
National Institute of Food and Agriculture	535.0	615.1	546.7	568.1	585.7	651.6	645.1	626.6	655.1	651.5	689.6
Rural Business-Cooperative Service	3.1	2.4	4.2	3.8	3.8	3.6	4.1	21.0	4.2	4.1	4.8
Department of Commerce	1,237.1	1,021.7	1,180.5	1,267.0	1,148.6	1,094.1	1,016.2	1,145.4	1,196.4	1,533.4	1,683.2
Economic Development Administration	0.6	0.6	0.5	0.5	0.2	0.5	0.2	0.8	20.7	28.3	19.0
National Institute of Standards and Technology	604.7	445.7	480.5	525.1	481.6	463.0	429.0	508.0	517.0	605.8	924.7
National Oceanic and Atmospheric Administration	597.1	501.0	651.3	695.4	618.5	600.3	558.2	606.9	627.1	863.3	684.7
National Telecommunications and Information Administration	21.8	50.4	19.6	23.5	24.2	6.9	6.7	7.0	7.0	6.9	7.6
U.S. Census Bureau	13.0	24.0	28.7	22.5	24.2	23.5	22.1	22.6	24.7	29.0	47.2
Department of Defense	36,262.2	40,129.3	45,777.8	52,148.9	58,067.6	63,661.1	65,933.9	72,290.5	71,996.6	75,973.7	73,623.9
Defense agencies and activities	7,195.9	9,380.8	12,359.8	12,641.3	13,188.7	15,406.6	14,338.4	15,940.0	15,946.7	16,241.7	16,264.7
Department of the Air Force	14,107.5	14,583.9	14,763.5	18,265.8	20,338.5	20,078.0	21,699.2	25,292.0	25,338.9	28,051.4	26,648.7
Department of the Army	5,323.7	6,223.7	7,076.6	7,609.5	9,223.0	10,208.3	11,318.3	11,628.6	11,877.8	11,908.5	10,853.2
Department of the Navy	9,345.1	9,710.3	11,344.5	13,396.6	15,019.3	17,660.7	18,399.1	19,248.1	18,648.6	19,586.0	19,660.3
Operational Test and Evaluation, Director	32.9	205.3	233.5	235.7	298.2	307.5	178.9	181.9	184.7	186.2	196.9
Test and Evaluation, Deputy Under Secretary of Defense	257.0	25.3	na	na	na	na	na	na	na	na	na
Department of Education	247.3	277.6	285.6	302.9	311.4	316.0	337.0	333.1	328.1	322.4	362.8
Department of Energy	6,873.8	7,651.4	8,072.2	8,436.0	8,560.5	8,596.7	8,340.1	8,629.8	8,990.3	11,562.2	11,644.9
Advanced Research Projects Agency—Energy	na	na	na	na	na	na	na	na	0.0	0.0	377.8
Bonneville Power Administration	NA	NA	22.9	23.3	24.7	11.3	10.7	11.1	13.7	8.1	13.1
Civilian Radioactive Waste Management	NA	NA	62.5	75.8	78.9	53.5	52.9	10.5	1.4	0.1	0.0
Electricity Delivery and Energy Reliability	na	na	na	na	na	80.3	133.5	92.5	82.7	87.2	113.3
Energy Efficiency and Renewable Energy	na	NA	744.7	688.5	603.6	576.7	456.7	768.7	794.0	1,790.8	1,998.1
Environmental Management	NA	NA	160.3	69.4	42.8	49.8	34.0	18.7	19.4	30.2	89.8
Fossil Energy	NA	NA	373.5	643.8	532.3	572.7	455.0	430.6	417.0	504.8	503.8

TABLE 102

Federal obligations for research, development, and R&D plant, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
National Nuclear Security Administration	NA	NA	3,728.3	3,923.3	4,036.3	3,922.0	3,861.9	3,782.8	3,981.3	3,716.0	3,638.5
Defense Programs	NA	NA	2,770.0	2,996.7	3,135.1	3,001.3	2,865.2	2,826.8	2,939.4	2,608.2	2,406.7
Fissile Materials Disposition	NA	NA	27.4	25.1	1.0	0.0	0.0	0.0	NA	NA	NA
Naval Nuclear Propulsion Program	NA	NA	665.5	678.0	736.9	775.2	753.4	751.1	742.9	792.7	945.1
Office of Defense Nuclear Nonproliferation	NA	NA	265.4	223.5	163.3	145.5	243.3	204.8	299.0	315.1	286.7
Nuclear Energy	NA	NA	42.5	47.1	74.3	84.5	89.0	80.9	133.1	116.0	368.1
Office of Intelligence	NA	NA	5.3	4.0	0.0	NA	NA	NA	NA	NA	NA
Office of Science	NA	NA	2,932.2	2,960.7	3,167.8	3,245.9	3,246.4	3,434.1	3,547.8	5,309.1	4,542.4
Department of Health and Human Services	18,645.5	21,641.9	24,259.1	27,214.8	28,563.8	29,172.5	29,126.5	29,556.1	29,701.1	35,735.9	37,616.9
Administration for Children and Families	27.3	28.4	23.3	20.9	20.1	38.6	14.4	11.8	19.4	14.0	6.8
Administration for Community Living	2.8	3.7	3.7	0.0	3.0	2.9	2.9	0.0	0.0	0.0	0.0
Agency for Healthcare Research and Quality	198.8	269.7	298.7	308.7	303.7	318.7	318.7	318.9	334.4	378.1	852.5
Agency for Toxic Substances and Disease Registry	14.7	13.1	12.4	14.3	10.7	9.5	9.0	4.2	4.3	4.5	2.8
Centers for Disease Control and Prevention	505.0	544.0	521.0	564.0	539.8	510.8	688.5	678.7	545.1	420.3	446.9
Centers for Medicare and Medicaid Services	61.5	138.0	117.0	73.6	77.6	77.3	62.4	57.3	31.1	30.1	81.7
Food and Drug Administration	146.7	160.4	149.7	145.6	140.8	142.8	147.2	137.7	143.0	171.2	223.2
Health Resources and Services Administration	36.2	51.6	54.7	43.5	48.0	53.4	24.1	23.9	62.8	57.0	67.0
National Institutes of Health	17,134.8	19,771.3	22,343.5	25,964.6	27,311.8	27,926.0	27,778.1	28,257.4	28,539.6	34,640.7	35,881.7
Office of the Secretary of Health and Human Services	19.8	27.4	17.4	22.5	21.1	24.8	26.8	24.5	21.5	20.0	54.4
Office of Public Health and Science	3.1	2.5	2.5	2.6	NA	NA	NA	NA	NA	NA	NA
Office of the Assistant Secretary for Planning and Evaluation	16.7	24.9	14.9	19.9	21.1	24.8	26.8	24.5	21.5	20.0	54.4
Substance Abuse and Mental Health Services Administration	497.8	634.3	717.6	57.2	87.2	67.6	54.3	41.8	0.0	0.0	NA
Department of Homeland Security	na	na	na	NA	1,063.2	1,453.9	1,857.2	1,106.4	1,056.8	983.6	1,131.8
Science and Technology Directorate	na	na	na	NA	908.4	1,258.0	1,823.0	1,084.0	1,036.0	962.0	1,106.0
Transportation Security Administration	na	na	na	NA	137.9	180.5	11.7	3.8	0.0	0.0	NA
U.S. Coast Guard	na	na	na	NA	16.0	14.4	21.5	17.8	20.1	21.6	25.8
U.S. Secret Service	na	na	na	NA	1.0	1.0	1.0	0.8	0.7	NA	NA
Department of Housing and Urban Development	45.6	52.9	45.3	39.0	46.6	43.5	33.5	40.4	29.6	33.2	61.7
Department of the Interior	581.2	622.1	634.9	600.3	612.5	597.0	608.5	624.7	645.3	738.8	728.0
Bureau of Ocean Energy Management, Regulation and Enforcement	30.5	27.0	33.3	28.8	29.8	29.9	32.1	27.6	35.2	37.6	46.1
Bureau of Reclamation	9.8	9.7	10.4	11.0	16.3	17.3	11.1	15.5	15.2	13.1	13.3
National Park Service	34.7	12.9	26.2	10.3	14.3	3.5	3.8	7.7	8.5	14.1	7.6
U.S. Geological Survey	506.1	572.6	565.0	550.2	552.2	546.2	561.5	573.8	586.4	674.1	661.1
Department of Justice	80.5	103.4	99.2	148.2	105.3	127.5	127.9	184.4	114.5	103.4	125.4
Bureau of Prisons	7.8	14.1	8.7	9.7	10.8	12.7	12.2	12.7	10.6	10.5	10.8

TABLE 102

Federal obligations for research, development, and R&D plant, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Federal Bureau of Investigation	10.0	19.0	33.6	42.8	34.0	33.5	34.3	70.8	26.1	14.5	30.0
Immigration and Naturalization Service	0.6	0.9	0.0	na	na	na	na	na	na	na	na
Office of Justice Programs	62.2	69.3	56.9	95.7	60.5	81.3	81.5	100.9	77.8	78.4	84.6
Department of Labor	83.7	97.4	166.4	189.1	199.4	164.4	95.3	49.6	42.5	31.4	14.3
Bureau of Labor Statistics	12.3	21.5	20.7	20.6	22.4	22.5	22.8	23.7	24.2	0.0	NA
Employee Benefits Security Administration	2.7	3.3	2.7	2.7	2.5	2.7	2.6	1.8	2.2	2.2	5.8
Employment and Training Administration	60.9	60.9	137.1	160.0	170.0	133.7	64.1	18.8	10.7	22.4	NA
Occupational Safety and Health Administration	5.8	5.7	3.8	3.1	3.4	3.4	3.5	3.4	3.6	4.5	5.9
Office of the Secretary of Labor	1.3	5.3	1.2	1.8	0.2	0.5	0.3	0.3	0.0	0.0	0.0
Pension Benefit Guaranty Corp.	0.7	0.7	0.7	0.9	0.9	1.6	1.9	1.8	1.8	2.4	2.6
Department of State	1.5	2.2	2.3	2.3	3.0	3.3	4.2	3.8	3.7	3.7	2.9
Department of Transportation	479.3	690.5	867.2	711.8	647.0	436.7	838.0	811.0	825.2	846.2	929.2
Federal Aviation Administration	230.5	300.6	359.6	262.6	234.2	243.7	277.0	259.8	274.3	316.1	408.7
Federal Highway Administration	126.7	240.8	258.3	305.2	323.4	73.9	400.1	404.7	377.3	347.8	336.8
Federal Motor Carrier Safety Administration	3.9	11.4	3.7	6.8	6.4	6.6	5.3	9.4	8.4	6.9	6.9
Federal Railroad Administration	27.4	26.2	34.1	33.1	29.9	31.8	49.0	39.6	39.4	41.7	43.8
Federal Transit Administration	8.9	8.0	5.8	7.1	4.6	4.2	16.6	6.0	9.5	10.4	22.6
National Highway Traffic Safety Administration	50.6	58.3	59.6	65.4	6.7	40.1	57.5	64.1	83.3	82.0	70.8
Office of the Secretary of Transportation	4.0	13.0	18.4	21.0	31.8	21.0	14.8	6.5	13.5	20.5	23.5
Pipeline and Hazardous Materials Safety Administration	na	na	na	na	10.0	13.9	15.2	18.2	8.9	9.8	10.0
Research and Innovative Technology Administration	na	na	na	na	0.0	1.5	2.5	2.7	10.7	11.1	6.0
Research and Special Programs Administration	6.9	8.4	10.2	10.6	na	na	na	na	na	na	na
Transportation Security Administration	na	na	95.0	na	na	na	na	na	na	na	na
U.S. Coast Guard	20.3	23.8	22.4	na	na	na	na	na	na	na	na
Department of the Treasury	61.5	67.7	74.4	60.0	62.4	66.4	68.8	65.2	65.5	68.6	68.5
Bureau of Engraving and Printing	2.8	4.7	7.1	4.9	4.2	6.2	6.0	5.3	5.3	3.0	1.2
Internal Revenue Service	54.4	57.3	55.5	54.4	57.3	57.8	55.4	54.8	59.6	64.9	66.3
Office of Thrift Supervision	0.1	0.1	0.1	0.0	NA	NA	NA	NA	NA	NA	NA
U.S. Customs Service	1.9	4.0	10.6	na	na	na	na	na	na	na	na
U.S. Mint	1.3	0.8	0.3	0.7	1.0	2.4	7.4	5.1	0.6	0.8	1.1
U.S. Secret Service	1.0	0.7	0.8	na	na	na	na	na	na	na	na
Department of Veterans Affairs	342.0	345.3	329.2	365.7	405.6	402.3	412.0	446.5	480.0	510.0	563.0
Other agencies											
Agency for International Development	218.8	267.0	269.8	286.0	264.8	257.5	255.0	234.5	123.8	160.1	84.3
Appalachian Regional Commission	0.6	0.7	0.7	0.7	0.6	0.8	1.0	0.8	0.8	1.0	0.6
Consumer Product Safety Commission	0.0	0.1	0.0	0.0	NA	NA	NA	NA	NA	NA	NA

TABLE 102

Federal obligations for research, development, and R&D plant, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Environmental Protection Agency	523.2	472.5	415.2	567.1	661.9	641.4	621.5	576.0	532.0	552.8	572.3
Federal Communications Commission	2.8	2.7	4.4	4.5	8.5	8.8	7.6	8.5	6.7	7.0	3.7
Federal Trade Commission	0.7	0.7	1.8	2.3	1.6	1.2	1.6	1.5	2.6	2.4	3.0
General Services Administration	0.0	*	0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA
Library of Congress	2.5	3.1	3.0	1.8	18.0	8.6	7.3	7.2	1.4	0.8	1.4
National Aeronautics and Space Administration	9,754.9	9,524.2	9,726.5	9,158.2	8,654.1	8,928.5	7,250.0	6,205.8	5,847.1	5,957.6	8,691.3
National Archives and Records Administration	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	4.6	4.6	4.6
National Science Foundation	2,942.1	3,328.7	3,500.8	3,943.8	4,166.0	4,098.3	4,239.5	4,406.9	4,506.4	6,924.8	6,073.4
Nuclear Regulatory Commission	53.0	53.0	74.3	64.0	72.1	70.1	71.4	76.5	61.0	61.2	85.4
Smithsonian Institution	101.0	101.0	109.0	107.0	110.8	115.1	146.4	186.0	188.0	226.7	213.0
Social Security Administration	28.8	28.9	22.8	36.8	30.4	35.1	67.8	68.2	54.1	67.9	63.0
U.S. Agency for Global Media	0.1	*	0.3	0.0	1.0	0.2	0.2	NA	NA	NA	NA

* = amount greater than \$0 but less than \$50,000. na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 103

Federal obligations for research, development, and R&D plant, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
All agencies	139,703.3	140,670.2	127,625.5	132,779.0	131,578.3	118,273.8	121,626.6	133,277.5	146,800.7	155,643.7
Departments										
Department of Agriculture	2,376.9	2,187.6	2,031.2	2,269.0	2,352.0	2,380.4	2,575.2	2,522.7	2,666.1	3,334.2
Agricultural Marketing Service	4.3	4.3	5.0	5.7	6.8	6.7	7.2	7.2	7.7	7.0
Agricultural Research Service	1,151.6	1,094.6	1,017.0	1,123.2	1,132.6	1,152.0	1,317.6	1,229.0	1,311.7	1,842.0
Animal and Plant Health Inspection Service	29.0	37.4	36.9	39.6	40.2	40.3	39.5	38.8	39.5	39.5
Economic Research Service	81.1	77.2	71.0	77.6	85.1	85.1	86.4	86.5	85.6	85.3
Foreign Agricultural Service	0.6	0.7	0.7	0.2	0.6	0.2	0.2	0.0	0.0	0.5
Forest Service	370.4	340.5	337.3	342.9	339.7	354.0	336.9	342.7	336.8	307.0
Grain Inspection, Packers, and Stockyards Administration	6.7	6.7	6.2	7.6	8.1	8.0	0.3	na	na	na
National Agricultural Statistics Service	7.4	7.4	7.5	9.4	9.3	9.3	9.4	9.5	9.5	9.0
National Institute of Food and Agriculture	724.1	614.2	546.1	657.0	726.1	721.3	774.4	804.9	871.4	1,040.0
Rural Business-Cooperative Service	1.7	4.5	3.6	5.8	3.5	3.6	3.3	4.2	3.9	3.9
Department of Commerce	1,308.9	1,230.7	1,293.9	1,567.8	1,519.4	1,635.6	1,847.1	1,832.3	1,999.0	2,240.3
Economic Development Administration	15.5	NA	NA	NA	NA	NA	NA	NA	NA	NA
National Institute of Standards and Technology	597.1	548.1	608.6	665.7	673.6	750.6	806.6	791.1	831.3	1,140.4
National Oceanic and Atmospheric Administration	629.0	573.4	546.7	633.8	691.9	674.9	811.9	922.2	1,064.2	972.0
National Telecommunications and Information Administration	7.8	7.6	7.3	9.6	12.3	10.6	8.2	9.0	7.9	8.2
U.S. Census Bureau	59.5	101.7	131.3	258.8	141.6	199.6	220.3	109.9	95.6	119.8
Department of Defense	75,328.2	73,973.6	63,654.7	65,128.6	61,683.0	44,926.7	45,163.8	53,444.0	59,389.2	62,766.9
Defense Advanced Research Projects Agency	2,846.4	2,749.7	2,371.8	2,822.5	2,815.6	2,933.4	2,894.5	3,018.2	3,321.0	3,667.2
Department of the Air Force	26,641.5	27,688.3	23,599.7	24,331.1	22,443.1	7,441.1	8,324.4	11,412.8	15,269.4	15,782.2
Department of the Army	9,831.8	9,219.8	7,883.3	7,332.1	6,764.3	6,373.4	7,530.8	8,581.3	10,274.8	10,754.8
Department of the Navy	17,814.0	17,753.1	15,439.9	15,590.6	15,525.4	16,682.4	15,284.5	15,525.0	15,484.4	16,921.3
Other defense agencies	18,194.6	16,562.7	14,360.1	15,052.4	14,134.6	11,496.5	11,129.5	14,906.8	15,039.6	15,641.5
Department of Education	346.1	338.0	309.9	322.0	251.3	244.4	261.8	266.2	235.8	242.2
Department of Energy	10,680.4	10,635.2	10,397.1	11,296.3	12,343.0	13,343.2	13,583.9	14,894.1	16,621.9	18,539.2
Advanced Research Projects Agency—Energy	174.9	102.8	182.1	260.9	241.6	299.3	273.8	159.9	405.0	425.0
Bonneville Power Administration	13.2	14.5	14.4	16.0	15.6	15.6	14.0	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	88.8	101.3	83.0	103.6	97.2	112.4	133.0	145.8	137.7	153.9
Energy Efficiency and Renewable Energy	902.5	986.1	922.3	870.0	1,082.8	1,291.3	1,444.6	1,913.3	2,001.3	2,985.2
Environmental Management	67.5	45.8	9.1	27.6	25.1	29.7	31.4	38.0	26.1	11.6
Fossil Energy	429.6	382.7	357.5	441.7	539.8	608.7	620.3	682.9	682.0	709.0
National Nuclear Security Administration	4,164.3	4,126.7	4,255.2	4,532.2	4,527.6	4,818.7	4,739.9	4,531.0	6,077.9	6,612.1
Defense Programs	2,866.5	2,815.2	2,967.5	3,119.7	3,076.4	3,198.0	3,070.7	2,831.4	3,997.8	4,649.3
Naval Nuclear Propulsion Program	974.3	1,080.0	994.1	1,115.5	1,238.5	1,375.5	1,420.1	1,420.0	1,788.6	1,648.4

TABLE 103

Federal obligations for research, development, and R&D plant, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
Office of Defense Nuclear Nonproliferation	323.5	231.5	293.6	297.0	212.7	245.2	249.0	279.5	291.5	314.5
Nuclear Energy	387.8	361.2	263.4	323.9	728.1	762.8	891.3	1,115.6	606.4	675.6
Office of Cybersecurity, Energy Security, and Emergency Response	na	na	na	na	na	na	na	0.0	51.9	43.9
Office of Science	4,451.8	4,514.0	4,309.9	4,720.4	5,085.4	5,404.8	5,435.7	6,307.6	6,633.6	6,923.0
Department of Health and Human Services	30,928.0	31,335.8	29,512.8	30,799.1	30,425.5	32,366.8	33,901.8	37,115.8	39,434.2	41,826.7
Administration for Children and Families	9.6	8.4	2.4	3.2	2.2	3.1	2.4	3.0	2.3	1.6
Administration for Community Living	0.0	0.0	0.0	0.0	76.0	83.1	83.3	82.7	83.1	90.2
Agency for Healthcare Research and Quality	370.7	365.8	365.0	364.0	364.0	334.0	324.0	334.0	338.0	308.1
Agency for Toxic Substances and Disease Registry	5.1	1.4	1.1	1.4	1.8	2.2	2.8	2.8	7.0	7.0
Biomedical Advanced Research and Development Authority	NA	NA	NA	NA	NA	NA	NA	NA	736.2	747.0
Centers for Disease Control and Prevention	385.9	512.4	362.9	408.9	489.3	521.2	475.5	451.1	419.4	405.2
Centers for Medicare and Medicaid Services	35.4	21.0	20.0	33.6	24.0	29.5	28.9	230.7	133.5	136.0
Food and Drug Administration	233.7	358.9	364.3	395.1	382.4	491.2	379.6	485.1	519.1	530.0
Health Resources and Services Administration	37.4	38.2	37.3	38.5	41.7	41.5	46.3	36.3	32.6	31.5
National Institutes of Health	29,830.3	30,010.1	28,341.3	29,535.9	29,026.0	30,843.0	32,542.0	35,473.0	37,146.0	39,553.0
Office of the Secretary of Health and Human Services	19.9	19.5	18.6	18.6	18.0	18.0	16.9	17.1	17.0	17.0
Office of the Assistant Secretary for Planning and Evaluation	19.9	19.5	18.6	18.6	18.0	18.0	16.9	17.1	17.0	17.0
Department of Homeland Security	1,127.5	832.2	718.8	943.8	1,645.2	689.2	869.9	913.1	648.5	507.7
Countering Weapons of Mass Destruction Office	NA	NA	NA	84.4	71.3	63.0	69.3	29.9	81.4	41.4
Cybersecurity and Infrastructure Security Agency	na	na	na	na	na	na	na	7.2	13.1	14.4
Science and Technology Directorate	1,105.0	792.0	695.9	832.0	1,553.0	601.4	777.8	832.0	510.5	422.0
Transportation Security Administration	NA	NA	NA	NA	NA	NA	NA	20.2	20.6	22.9
U.S. Coast Guard	22.5	40.2	22.9	27.4	20.9	24.7	22.8	22.8	20.8	4.9
U.S. Secret Service	NA	NA	NA	NA	NA	NA	NA	1.0	1.9	2.1
Department of Housing and Urban Development	72.9	89.6	67.4	54.3	58.5	66.8	63.8	62.0	61.0	88.6
Department of the Interior	716.5	742.7	717.3	762.4	808.7	859.9	868.1	768.6	831.5	891.1
Bureau of Indian Affairs	NA	NA	NA	NA	NA	NA	NA	5.0	5.0	5.0
Bureau of Land Management	NA	NA	NA	NA	16.4	18.0	18.0	20.8	20.8	20.8
Bureau of Ocean Energy Management	na	39.0	39.5	48.0	50.4	72.2	75.7	78.3	85.5	96.9
Bureau of Ocean Energy Management, Regulation and Enforcement	52.3	na	na	na	na	na	na	na	na	na
Bureau of Reclamation	15.1	12.0	13.0	14.2	12.7	22.0	28.6	22.6	24.3	37.5
Bureau of Safety and Environmental Enforcement	na	13.2	21.4	35.6	25.3	29.5	15.7	6.8	12.6	22.7
National Park Service	9.2	5.6	7.0	15.2	8.3	8.7	9.5	9.9	10.1	10.2
Office of Surface Mining Reclamation and Enforcement	NA	NA	NA	NA	NA	NA	NA	0.0	0.3	0.5

TABLE 103

Federal obligations for research, development, and R&D plant, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
U.S. Fish and Wildlife Service	NA	NA	NA	NA	29.8	32.5	32.8	32.7	32.7	32.7
U.S. Geological Survey	640.0	672.8	636.3	649.5	665.8	676.9	687.8	592.6	640.2	664.8
Department of Justice	102.3	85.0	118.7	160.5	149.7	208.0	126.9	106.6	121.2	107.0
Bureau of Prisons	11.6	10.5	11.1	10.8	11.0	11.0	9.6	5.8	6.6	7.0
Federal Bureau of Investigation	17.7	7.7	39.0	9.6	12.9	13.0	2.2	2.9	1.0	1.0
Office of Justice Programs	72.9	66.8	68.6	140.1	125.8	184.0	115.1	98.0	113.6	99.0
Department of Labor	55.6	21.5	16.3	14.1	14.2	9.6	4.6	4.8	4.4	4.7
Employee Benefits Security Administration	48.5	12.8	9.6	7.5	6.5	4.6	2.6	3.0	2.6	2.9
Occupational Safety and Health Administration	4.3	6.0	4.2	3.6	3.4	0.7	2.0	1.9	1.7	1.8
Pension Benefit Guaranty Corp.	2.8	2.7	2.6	3.0	4.3	4.3	0.0	0.0	NA	NA
Department of State	3.3	2.2	1.5	NA	2.0	2.0	2.1	62.1	62.2	62.3
Department of Transportation	861.8	936.1	875.8	847.7	884.5	961.5	987.0	1,076.6	1,051.7	1,384.6
Federal Aviation Administration	347.2	360.5	310.5	296.9	339.7	425.8	435.3	403.6	424.3	739.8
Federal Highway Administration	344.1	403.3	397.4	397.6	313.0	332.2	351.7	490.6	451.6	417.7
Federal Motor Carrier Safety Administration	6.3	7.3	7.8	7.5	7.6	10.6	11.7	9.3	7.8	11.1
Federal Railroad Administration	47.1	46.1	52.7	43.1	46.7	43.6	45.9	49.0	41.4	40.0
Federal Transit Administration	23.8	25.5	16.4	8.2	81.7	35.3	55.4	10.2	2.8	20.0
National Highway Traffic Safety Administration	71.0	68.7	64.8	65.1	62.5	86.6	69.0	76.0	76.3	74.2
Office of the Secretary of Transportation	9.3	8.9	10.9	15.1	11.5	17.9	11.1	16.4	19.8	27.0
Pipeline and Hazardous Materials Safety Administration	7.9	11.0	10.7	14.2	21.8	9.6	7.0	21.6	27.8	54.8
Research and Innovative Technology Administration	5.1	4.9	4.7	na	na	na	na	na	na	na
Department of the Treasury	77.6	75.6	74.1	74.0	73.1	85.2	8.2	37.7	61.3	61.8
Bureau of Engraving and Printing	5.8	5.0	9.4	9.4	9.5	18.8	6.9	37.7	58.8	61.4
Internal Revenue Service	70.8	69.0	64.5	64.0	63.6	64.6	0.0	0.0	0.0	0.0
U.S. Mint	1.0	1.6	0.2	0.6	*	1.8	1.3	0.0	2.5	0.4
Department of Veterans Affairs	612.9	614.8	639.0	588.8	661.6	695.2	682.3	1,349.0	1,507.9	1,602.7
Other agencies										
Administrative Office of the U.S. Courts	NA	NA	NA	NA	NA	6.8	8.0	6.8	6.4	7.7
Agency for International Development	119.2	77.4	125.5	59.9	212.2	192.8	192.2	166.6	220.6	220.6
Appalachian Regional Commission	0.4	0.6	0.2	0.6	0.4	0.9	0.1	0.5	0.9	0.0
Consumer Product Safety Commission	NA	2.0	1.3	1.8	2.0	2.0	1.9	1.0	0.9	0.2
Environmental Protection Agency	581.7	581.1	529.7	538.0	520.7	513.3	498.4	492.1	490.0	493.0
Federal Communications Commission	3.7	4.0	5.2	6.7	4.8	5.1	7.2	5.5	2.0	1.8
Federal Trade Commission	2.7	2.9	2.7	2.5	1.9	3.0	5.7	5.8	6.0	7.3
Library of Congress	1.5	1.1	1.3	1.2	1.3	1.7	1.9	3.3	1.9	2.7
National Aeronautics and Space Administration	8,429.0	10,758.3	10,494.3	10,880.6	11,413.1	12,461.7	12,638.1	10,813.9	13,616.4	13,486.8

TABLE 103

Federal obligations for research, development, and R&D plant, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
National Archives and Records Administration	3.1	2.0	1.1	0.9	0.7	0.7	0.5	0.5	0.5	0.0
National Science Foundation	5,536.6	5,705.4	5,328.5	5,800.2	5,989.7	6,022.3	5,945.7	6,358.0	6,648.3	6,710.8
Nuclear Regulatory Commission	83.8	82.6	75.9	85.0	91.9	80.6	67.4	77.7	74.9	65.3
Patient-Centered Outcomes Research Trust Fund	41.1	41.1	334.4	282.6	152.1	114.9	883.9	491.7	578.4	540.7
Smithsonian Institution	248.7	246.2	240.3	230.9	229.0	235.0	240.5	260.6	269.0	274.0
Social Security Administration	53.0	64.9	56.7	59.6	58.9	129.0	109.5	71.6	146.2	131.8
Tennessee Valley Authority	NA	NA	NA	NA	NA	NA	5.6	13.2	9.7	8.2
U.S. Agency for Global Media	NA	NA	NA	NA	NA	NA	NA	NA	6.1	6.2
U.S. Postal Service	NA	NA	NA	NA	28.0	29.4	73.3	53.2	26.7	26.6

* = amount greater than \$0 but less than \$50,000. na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. Beginning with FY 2016, the totals reported for development obligations represent a refinement to this category by more narrowly defining it to be "experimental development." Most notably, totals for development do not include the Department of Defense (DOD) Budget Activity 7 (Operational Systems Development) obligations. Those funds, previously included in DOD's development obligation totals, support the development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year. Therefore, the data are not directly comparable with totals reported in previous years. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 104

Federal obligations for research and development, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All agencies	75,910.3	84,492.5	93,708.6	103,527.7	112,074.5	118,848.5	121,729.9	127,262.9	127,106.1	141,090.1	140,354.5
Departments											
Department of Agriculture	1,746.8	1,959.1	1,971.8	2,039.6	2,102.2	2,184.3	2,213.7	2,248.4	2,202.1	2,267.2	2,364.2
Agricultural Marketing Service	5.1	4.8	5.2	4.8	9.0	7.9	6.3	6.4	5.0	4.3	4.4
Agricultural Research Service	884.7	994.4	1,059.8	1,062.0	1,098.1	1,107.7	1,134.9	1,142.0	1,122.6	1,141.2	1,178.3
Animal and Plant Health Inspection Service	20.6	25.4	23.7	28.0	24.4	24.4	25.5	26.0	28.4	28.9	30.1
Economic Research Service	64.2	65.6	67.0	68.4	70.8	74.0	75.0	92.0	77.8	78.9	86.4
Food Safety and Inspection Service	2.3	2.6	NA	NA	NA	NA	NA	NA	NA	NA	NA
Foreign Agricultural Service	1.4	1.4	1.4	1.6	1.6	1.5	0.9	0.6	0.4	0.4	0.4
Forest Service	223.0	237.0	253.0	292.0	296.0	300.7	308.1	320.3	295.0	344.1	356.5
Grain Inspection, Packers, and Stockyards Administration	3.6	6.1	6.0	5.3	6.7	6.7	7.1	6.7	6.6	6.5	6.3
National Agricultural Statistics Service	3.9	4.2	4.6	5.5	6.1	6.1	6.5	6.8	6.9	7.2	7.5
National Institute of Food and Agriculture	535.0	615.1	546.7	568.1	585.7	651.6	645.1	626.6	655.1	651.5	689.6
Rural Business-Cooperative Service	3.1	2.4	4.2	3.8	3.8	3.6	4.1	21.0	4.2	4.1	4.8
Department of Commerce	1,036.6	997.9	1,151.4	1,208.0	1,058.9	1,033.4	941.7	1,027.7	1,044.7	1,146.9	1,274.4
Economic Development Administration	0.6	0.6	0.5	0.5	0.2	0.5	0.2	0.8	2.2	2.9	6.8
National Institute of Standards and Technology	404.2	422.0	451.4	476.0	444.2	418.7	385.7	456.5	430.0	500.5	687.4
National Oceanic and Atmospheric Administration	597.1	501.0	651.3	685.4	566.3	583.8	526.9	540.7	580.8	607.5	525.4
National Telecommunications and Information Administration	21.8	50.4	19.6	23.5	24.2	6.9	6.7	7.0	7.0	6.9	7.6
U.S. Census Bureau	13.0	24.0	28.7	22.5	24.2	23.5	22.1	22.6	24.7	29.0	47.2
Department of Defense	36,214.0	39,981.9	45,412.7	51,897.5	57,792.9	63,388.3	65,870.7	72,211.2	71,833.3	75,856.6	73,471.1
Defense agencies and activities	7,190.8	9,376.1	12,075.7	12,503.4	13,067.6	15,324.5	14,303.6	15,903.8	15,905.6	16,240.9	16,264.5
Department of the Air Force	14,102.0	14,552.0	14,740.0	18,259.0	20,319.0	19,971.0	21,687.9	25,264.0	25,232.3	27,950.4	26,521.4
Department of the Army	5,323.7	6,223.7	7,076.6	7,609.5	9,223.0	10,208.3	11,318.3	11,628.6	11,877.8	11,908.5	10,853.2
Department of the Navy	9,307.6	9,599.6	11,287.0	13,290.0	14,885.2	17,577.0	18,381.9	19,233.0	18,633.0	19,570.6	19,635.0
Operational Test and Evaluation, Director	32.9	205.3	233.5	235.7	298.2	307.5	178.9	181.9	184.7	186.2	196.9
Test and Evaluation, Deputy Under Secretary of Defense	257.0	25.3	na	na	na	na	na	na	na	na	na
Department of Education	247.3	277.6	285.6	302.9	311.4	316.0	337.0	333.1	328.1	322.4	362.8
Department of Energy	6,063.1	6,668.0	7,044.2	7,411.9	7,553.8	7,733.4	7,562.0	7,877.4	8,238.8	9,889.9	10,685.5
Advanced Research Projects Agency—Energy	na	na	na	na	na	na	na	na	0.0	0.0	377.8
Bonneville Power Administration	NA	NA	22.9	23.3	24.7	11.3	10.7	11.1	13.7	8.1	13.1
Civilian Radioactive Waste Management	NA	NA	62.5	75.8	78.9	53.5	52.9	10.5	1.4	0.1	0.0
Electricity Delivery and Energy Reliability	na	na	na	na	na	80.3	133.5	92.5	82.7	87.2	113.3
Energy Efficiency and Renewable Energy	na	NA	739.8	682.3	583.9	557.3	430.6	661.6	729.1	1,583.7	1,895.2
Environmental Management	NA	NA	160.3	69.4	42.8	49.8	34.0	18.7	19.4	30.2	89.8
Fossil Energy	NA	NA	363.3	639.3	526.1	566.4	435.7	418.6	403.9	485.8	484.8

TABLE 104

Federal obligations for research and development, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
National Nuclear Security Administration	NA	NA	3,302.4	3,475.4	3,600.2	3,618.8	3,557.3	3,590.9	3,718.2	3,547.7	3,448.4
Defense Programs	NA	NA	2,372.7	2,576.7	2,727.4	2,732.9	2,593.6	2,655.9	2,707.4	2,476.2	2,247.4
Fissile Materials Disposition	NA	NA	27.4	25.1	1.0	0.0	0.0	0.0	NA	NA	NA
Naval Nuclear Propulsion Program	NA	NA	637.0	650.0	708.6	740.5	720.4	730.3	711.8	756.4	914.3
Office of Defense Nuclear Nonproliferation	NA	NA	265.4	223.5	163.3	145.5	243.3	204.8	299.0	315.1	286.7
Nuclear Energy	NA	NA	42.5	47.1	74.3	84.5	89.0	80.9	133.1	116.0	368.1
Office of Intelligence	NA	NA	5.3	4.0	0.0	NA	NA	NA	NA	NA	NA
Office of Science	NA	NA	2,345.1	2,395.3	2,623.1	2,711.5	2,818.3	2,992.5	3,137.3	4,031.2	3,895.1
Department of Health and Human Services	18,425.9	21,341.9	24,011.6	26,399.1	28,133.2	28,745.5	28,765.6	29,301.5	29,553.7	35,584.0	35,934.5
Administration for Children and Families	27.3	28.4	23.3	20.9	20.1	38.6	14.4	11.8	19.4	14.0	6.8
Administration for Community Living	2.8	3.7	3.7	0.0	3.0	2.9	2.9	0.0	0.0	0.0	0.0
Agency for Healthcare Research and Quality	198.8	269.7	298.7	308.7	303.7	318.7	318.7	318.9	334.4	378.1	852.5
Agency for Toxic Substances and Disease Registry	14.7	13.1	12.4	14.3	10.7	9.5	9.0	4.2	4.3	4.5	2.8
Centers for Disease Control and Prevention	505.0	544.0	521.0	564.0	539.8	510.8	544.6	544.3	538.6	420.3	446.9
Centers for Medicare and Medicaid Services	61.5	138.0	117.0	73.6	77.6	77.3	62.4	57.3	31.1	30.1	81.7
Food and Drug Administration	144.2	151.6	136.3	138.3	132.3	142.1	143.3	129.3	137.9	166.4	210.6
Health Resources and Services Administration	35.6	51.0	54.1	43.2	47.4	52.9	23.6	23.2	62.1	56.3	66.3
National Institutes of Health	16,918.3	19,480.7	22,110.1	25,156.4	26,890.4	27,500.3	27,565.6	28,146.3	28,404.4	34,494.3	34,212.6
Office of the Secretary of Health and Human Services	19.8	27.4	17.4	22.5	21.1	24.8	26.8	24.5	21.5	20.0	54.4
Office of Public Health and Science	3.1	2.5	2.5	2.6	NA	NA	NA	NA	NA	NA	NA
Office of the Assistant Secretary for Planning and Evaluation	16.7	24.9	14.9	19.9	21.1	24.8	26.8	24.5	21.5	20.0	54.4
Substance Abuse and Mental Health Services Administration	497.8	634.3	717.6	57.2	87.2	67.6	54.3	41.8	0.0	0.0	NA
Department of Homeland Security	na	na	na	NA	946.0	1,362.2	1,725.4	862.9	837.2	672.5	674.1
Science and Technology Directorate	na	na	na	NA	792.2	1,167.3	1,691.6	841.0	816.9	652.4	649.4
Transportation Security Administration	na	na	na	NA	137.9	180.5	11.7	3.8	0.0	0.0	NA
U.S. Coast Guard	na	na	na	NA	15.0	13.4	21.2	17.2	19.6	20.1	24.7
U.S. Secret Service	na	na	na	NA	1.0	1.0	1.0	0.8	0.7	NA	NA
Department of Housing and Urban Development	45.6	52.9	45.3	39.0	46.6	43.5	33.5	40.4	29.6	33.2	61.7
Department of the Interior	579.9	619.7	632.8	596.7	604.6	589.5	603.0	615.1	636.2	732.4	721.7
Bureau of Ocean Energy Management, Regulation and Enforcement	29.2	24.5	31.2	26.7	27.2	27.1	28.9	25.0	32.4	35.7	43.4
Bureau of Reclamation	9.8	9.7	10.4	9.5	10.9	12.7	8.8	8.5	8.9	8.5	9.7
National Park Service	34.7	12.9	26.2	10.3	14.3	3.5	3.8	7.7	8.5	14.1	7.6
U.S. Geological Survey	506.1	572.6	565.0	550.2	552.2	546.2	561.5	573.8	586.4	674.1	661.1
Department of Justice	80.5	103.4	99.2	148.2	105.3	127.5	127.9	176.2	113.4	103.4	125.4
Bureau of Prisons	7.8	14.1	8.7	9.7	10.8	12.7	12.2	12.7	10.6	10.5	10.8

TABLE 104

Federal obligations for research and development, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Federal Bureau of Investigation	10.0	19.0	33.6	42.8	34.0	33.5	34.3	70.8	26.1	14.5	30.0
Immigration and Naturalization Service	0.6	0.9	0.0	na	na	na	na	na	na	na	na
Office of Justice Programs	62.2	69.3	56.9	95.7	60.5	81.3	81.5	92.7	76.8	78.4	84.6
Department of Labor	83.7	97.4	166.4	189.1	199.4	164.4	95.3	49.6	42.5	31.4	14.3
Bureau of Labor Statistics	12.3	21.5	20.7	20.6	22.4	22.5	22.8	23.7	24.2	0.0	NA
Employee Benefits Security Administration	2.7	3.3	2.7	2.7	2.5	2.7	2.6	1.8	2.2	2.2	5.8
Employment and Training Administration	60.9	60.9	137.1	160.0	170.0	133.7	64.1	18.8	10.7	22.4	NA
Occupational Safety and Health Administration	5.8	5.7	3.8	3.1	3.4	3.4	3.5	3.4	3.6	4.5	5.9
Office of the Secretary of Labor	1.3	5.3	1.2	1.8	0.2	0.5	0.3	0.3	0.0	0.0	0.0
Pension Benefit Guaranty Corp.	0.7	0.7	0.7	0.9	0.9	1.6	1.9	1.8	1.8	2.4	2.6
Department of State	1.5	2.2	2.3	2.3	3.0	3.3	4.2	3.8	3.7	3.7	2.9
Department of Transportation	467.4	674.4	815.5	693.3	629.3	418.4	819.2	791.2	806.1	826.0	908.1
Federal Aviation Administration	219.0	286.9	345.1	245.0	217.8	226.6	260.0	241.9	257.1	297.7	390.4
Federal Highway Administration	126.7	240.8	258.3	305.2	323.4	73.9	400.1	404.7	377.3	347.8	336.8
Federal Motor Carrier Safety Administration	3.9	11.4	3.7	6.8	6.4	6.6	5.3	9.4	8.4	6.9	6.9
Federal Railroad Administration	27.3	24.1	33.2	32.2	28.6	30.7	47.2	37.7	37.5	39.8	41.1
Federal Transit Administration	8.9	8.0	5.8	7.1	4.6	4.2	16.6	6.0	9.5	10.4	22.6
National Highway Traffic Safety Administration	50.6	58.3	59.6	65.4	6.7	40.1	57.5	64.1	83.3	82.0	70.8
Office of the Secretary of Transportation	4.0	13.0	18.4	21.0	31.8	21.0	14.8	6.5	13.5	20.5	23.5
Pipeline and Hazardous Materials Safety Administration	na	na	na	na	10.0	13.9	15.2	18.2	8.9	9.8	10.0
Research and Innovative Technology Administration	na	na	na	na	0.0	1.5	2.5	2.7	10.7	11.1	6.0
Research and Special Programs Administration	6.9	8.4	10.2	10.6	na	na	na	na	na	na	na
Transportation Security Administration	na	na	59.0	na	na	na	na	na	na	na	na
U.S. Coast Guard	20.0	23.5	22.0	na	na	na	na	na	na	na	na
Department of the Treasury	61.4	67.7	74.4	60.0	62.4	66.4	65.1	63.6	65.5	68.6	68.5
Bureau of Engraving and Printing	2.8	4.7	7.1	4.9	4.2	6.2	6.0	5.3	5.3	3.0	1.2
Internal Revenue Service	54.4	57.3	55.5	54.4	57.3	57.8	55.4	54.8	59.6	64.9	66.3
Office of Thrift Supervision	0.1	0.1	0.1	0.0	NA	NA	NA	NA	NA	NA	NA
U.S. Customs Service	1.8	4.0	10.6	na	na	na	na	na	na	na	na
U.S. Mint	1.3	0.8	0.3	0.7	1.0	2.4	3.7	3.5	0.6	0.8	1.1
U.S. Secret Service	1.0	0.7	0.8	na	na	na	na	na	na	na	na
Department of Veterans Affairs	341.7	345.0	328.8	365.4	405.2	402.0	411.6	446.1	479.6	510.0	563.0
Other agencies											
Agency for International Development	218.8	267.0	269.8	286.0	264.8	257.5	255.0	234.5	123.8	160.1	84.3
Appalachian Regional Commission	0.6	0.7	0.7	0.7	0.6	0.8	1.0	0.8	0.8	1.0	0.6
Consumer Product Safety Commission	0.0	0.1	0.0	0.0	NA	NA	NA	NA	NA	NA	NA

TABLE 104

Federal obligations for research and development, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Environmental Protection Agency	502.2	450.5	415.2	567.1	661.9	641.4	621.5	576.0	532.0	552.8	572.3
Federal Communications Commission	2.8	2.7	4.4	4.5	8.5	8.8	7.6	8.5	6.7	7.0	3.7
Federal Trade Commission	0.7	0.7	1.8	2.3	1.6	1.2	1.6	1.5	2.6	2.4	3.0
Library of Congress	2.5	3.1	3.0	1.8	18.0	8.6	7.3	7.2	1.4	0.8	1.4
National Aeronautics and Space Administration	6,881.9	7,355.0	7,508.2	7,499.0	7,182.5	7,394.8	7,211.0	6,126.2	5,827.5	5,937.0	7,121.3
National Archives and Records Administration	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	4.6	4.6	4.6
National Science Foundation	2,725.5	3,043.5	3,260.0	3,608.6	3,770.7	3,742.9	3,790.6	3,970.1	4,135.2	6,095.2	5,015.7
Nuclear Regulatory Commission	53.0	53.0	74.3	64.0	72.1	70.1	71.4	76.5	61.0	61.2	85.4
Smithsonian Institution	98.0	98.0	106.0	104.0	108.0	109.0	119.0	145.0	142.0	152.0	167.0
Social Security Administration	28.8	28.9	22.8	36.8	30.4	35.1	67.8	68.2	54.1	67.9	63.0
U.S. Agency for Global Media	0.1	*	0.3	0.0	1.0	0.2	0.2	NA	NA	NA	NA

* = amount greater than \$0 but less than \$50,000. na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. See [appendix table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 105

Federal obligations for research and development, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
All agencies	135,532.6	138,524.6	125,720.4	130,561.3	128,753.3	115,832.8	118,974.8	129,424.8	142,424.2	150,884.7
Departments										
Department of Agriculture	2,341.3	2,171.2	2,019.1	2,258.2	2,341.0	2,357.8	2,418.5	2,478.6	2,637.1	2,904.2
Agricultural Marketing Service	4.3	4.3	5.0	5.7	6.8	6.7	7.2	7.2	7.7	7.0
Agricultural Research Service	1,133.0	1,089.8	1,014.3	1,121.8	1,131.6	1,144.4	1,170.4	1,200.6	1,292.4	1,414.0
Animal and Plant Health Inspection Service	29.0	37.4	36.9	39.6	40.2	40.3	39.5	38.8	39.5	39.5
Economic Research Service	81.1	77.2	71.0	77.6	85.1	85.1	86.4	86.5	85.6	85.3
Foreign Agricultural Service	0.6	0.7	0.7	0.2	0.6	0.2	0.2	0.0	0.0	0.5
Forest Service	353.5	330.7	329.3	335.4	331.8	341.0	327.5	327.0	327.2	305.0
Grain Inspection, Packers, and Stockyards Administration	6.7	5.0	4.7	5.7	6.0	6.0	0.2	na	na	na
National Agricultural Statistics Service	7.4	7.4	7.5	9.4	9.3	9.3	9.4	9.5	9.5	9.0
National Institute of Food and Agriculture	724.1	614.2	546.1	657.0	726.1	721.3	774.4	804.9	871.4	1,040.0
Rural Business-Cooperative Service	1.7	4.5	3.6	5.8	3.5	3.6	3.3	4.2	3.9	3.9
Department of Commerce	1,067.1	1,054.8	1,092.2	1,375.1	1,331.3	1,350.9	1,612.5	1,438.7	1,534.7	1,621.8
Economic Development Administration	0.6	NA	NA	NA	NA	NA	NA	NA	NA	NA
National Institute of Standards and Technology	506.9	512.7	535.1	602.3	633.9	629.4	715.7	686.1	712.3	768.4
National Oceanic and Atmospheric Administration	492.3	432.8	418.6	504.4	543.5	511.4	668.2	633.8	718.9	725.4
National Telecommunications and Information Administration	7.8	7.6	7.3	9.6	12.3	10.6	8.2	9.0	7.9	8.2
U.S. Census Bureau	59.5	101.7	131.3	258.8	141.6	199.6	220.3	109.9	95.6	119.8
Department of Defense	75,157.9	73,804.1	63,557.7	64,980.5	61,513.5	44,748.6	44,872.6	52,973.3	58,779.5	62,461.3
Defense Advanced Research Projects Agency	2,846.4	2,749.7	2,371.8	2,822.5	2,815.6	2,933.4	2,894.5	3,018.2	3,321.0	3,667.2
Department of the Air Force	26,500.1	27,545.2	23,524.2	24,210.4	22,320.1	7,321.5	8,099.5	11,202.7	15,076.8	15,621.8
Department of the Army	9,831.8	9,219.8	7,883.3	7,332.1	6,764.3	6,372.2	7,530.8	8,581.3	10,274.8	10,754.8
Department of the Navy	17,792.5	17,728.3	15,419.5	15,567.1	15,489.6	16,644.4	15,236.0	15,446.1	15,341.2	16,787.0
Other defense agencies	18,187.2	16,561.1	14,359.1	15,048.4	14,123.9	11,477.1	11,111.8	14,724.9	14,765.8	15,630.6
Department of Education	346.1	338.0	309.9	322.0	251.3	244.4	261.8	266.2	235.8	242.2
Department of Energy	9,945.8	9,952.0	9,841.0	10,525.8	11,391.0	12,208.6	12,308.4	12,832.4	14,376.4	16,136.0
Advanced Research Projects Agency—Energy	174.9	102.8	182.1	260.9	241.6	299.3	273.8	159.9	405.0	425.0
Bonneville Power Administration	13.2	14.5	14.4	16.0	15.6	15.6	14.0	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	88.8	101.3	83.0	103.6	97.2	112.4	133.0	145.8	137.7	153.9
Energy Efficiency and Renewable Energy	863.2	986.1	917.9	866.4	1,079.2	1,287.7	1,441.0	1,686.3	1,695.8	2,566.6
Environmental Management	67.5	45.8	9.1	27.6	25.1	29.7	31.4	38.0	26.1	11.6
Fossil Energy	410.6	366.8	342.3	425.6	524.0	608.7	604.6	661.6	659.0	680.0
National Nuclear Security Administration	4,036.3	4,033.9	4,180.4	4,416.7	4,271.3	4,568.0	4,434.7	4,057.4	5,740.6	6,319.6
Defense Programs	2,771.0	2,762.3	2,892.8	3,025.9	2,975.3	3,107.1	2,965.6	2,572.0	3,660.4	4,367.8
Naval Nuclear Propulsion Program	941.7	1,040.1	994.0	1,093.7	1,083.4	1,215.7	1,220.0	1,205.8	1,788.6	1,648.4

TABLE 105

Federal obligations for research and development, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
Office of Defense Nuclear Nonproliferation	323.5	231.5	293.6	297.0	212.7	245.2	249.0	279.5	291.5	303.5
Nuclear Energy	387.8	361.2	263.4	323.9	728.1	762.8	891.3	1,115.6	606.4	610.6
Office of Cybersecurity, Energy Security, and Emergency Response	na	na	na	na	na	na	na	0.0	51.9	43.9
Office of Science	3,903.5	3,939.5	3,848.2	4,085.1	4,409.0	4,524.5	4,484.7	4,967.7	5,053.9	5,324.9
Department of Health and Human Services	30,848.8	31,195.6	29,382.5	30,656.1	30,272.1	32,215.7	33,774.2	36,911.3	39,191.2	41,561.7
Administration for Children and Families	9.6	8.4	2.4	3.2	2.2	3.1	2.4	3.0	2.3	1.6
Administration for Community Living	0.0	0.0	0.0	0.0	76.0	83.1	83.3	82.7	83.1	90.2
Agency for Healthcare Research and Quality	370.7	365.8	365.0	364.0	364.0	334.0	324.0	334.0	338.0	308.1
Agency for Toxic Substances and Disease Registry	5.1	1.4	1.1	1.4	1.8	2.2	2.8	2.8	7.0	7.0
Biomedical Advanced Research and Development Authority	NA	NA	NA	NA	NA	NA	NA	NA	736.2	747.0
Centers for Disease Control and Prevention	385.9	512.4	362.9	408.9	489.3	521.2	475.5	451.1	419.4	405.2
Centers for Medicare and Medicaid Services	35.4	21.0	20.0	33.6	24.0	29.5	28.9	230.7	133.5	136.0
Food and Drug Administration	225.2	352.6	360.6	389.1	375.7	485.9	375.0	477.6	493.1	495.0
Health Resources and Services Administration	36.8	37.6	36.6	37.8	41.1	40.8	46.3	36.3	32.6	31.5
National Institutes of Health	29,760.2	29,876.8	28,215.3	29,399.6	28,880.0	30,698.0	32,419.0	35,276.0	36,929.0	39,323.0
Office of the Secretary of Health and Human Services	19.9	19.5	18.6	18.6	18.0	18.0	16.9	17.1	17.0	17.0
Office of the Assistant Secretary for Planning and Evaluation	19.9	19.5	18.6	18.6	18.0	18.0	16.9	17.1	17.0	17.0
Department of Homeland Security	559.1	601.8	390.8	582.7	742.2	572.2	856.6	911.8	647.2	507.7
Countering Weapons of Mass Destruction Office	NA	NA	NA	84.4	71.3	63.0	69.3	29.9	81.4	41.4
Cybersecurity and Infrastructure Security Agency	na	na	na	na	na	na	na	7.2	13.1	14.4
Science and Technology Directorate	537.8	562.7	369.1	472.2	651.4	485.7	765.8	832.0	510.5	422.0
Transportation Security Administration	NA	NA	NA	NA	NA	NA	NA	20.2	20.6	22.9
U.S. Coast Guard	21.3	39.1	21.7	26.1	19.6	23.5	21.5	21.5	19.5	4.9
U.S. Secret Service	NA	NA	NA	NA	NA	NA	NA	1.0	1.9	2.1
Department of Housing and Urban Development	72.9	89.6	67.4	54.3	58.5	66.8	63.8	62.0	61.0	88.6
Department of the Interior	706.0	737.8	709.3	757.6	800.1	856.5	862.6	765.6	826.8	882.7
Bureau of Indian Affairs	NA	NA	NA	NA	NA	NA	NA	5.0	5.0	5.0
Bureau of Land Management	NA	NA	NA	NA	16.4	18.0	18.0	20.8	20.8	20.8
Bureau of Ocean Energy Management	na	39.0	39.5	48.0	50.4	72.2	75.7	78.3	85.5	96.9
Bureau of Ocean Energy Management, Regulation and Enforcement	45.4	na	na	na	na	na	na	na	na	na
Bureau of Reclamation	11.5	10.0	10.1	12.0	9.8	20.9	27.4	21.4	23.2	36.4
Bureau of Safety and Environmental Enforcement	na	10.3	16.4	32.9	19.6	27.3	11.4	4.9	9.1	15.5
National Park Service	9.2	5.6	7.0	15.2	8.3	8.7	9.5	9.9	10.1	10.2
Office of Surface Mining Reclamation and Enforcement	NA	NA	NA	NA	NA	NA	NA	0.0	0.3	0.5

TABLE 105

Federal obligations for research and development, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
U.S. Fish and Wildlife Service	NA	NA	NA	NA	29.8	32.5	32.8	32.7	32.7	32.7
U.S. Geological Survey	640.0	672.8	636.3	649.5	665.8	676.9	687.8	592.6	640.2	664.8
Department of Justice	102.3	85.0	118.7	160.5	149.7	208.0	126.9	106.6	121.2	107.0
Bureau of Prisons	11.6	10.5	11.1	10.8	11.0	11.0	9.6	5.8	6.6	7.0
Federal Bureau of Investigation	17.7	7.7	39.0	9.6	12.9	13.0	2.2	2.9	1.0	1.0
Office of Justice Programs	72.9	66.8	68.6	140.1	125.8	184.0	115.1	98.0	113.6	99.0
Department of Labor	55.6	21.5	16.3	14.1	14.2	9.6	4.6	4.8	4.4	4.7
Employee Benefits Security Administration	48.5	12.8	9.6	7.5	6.5	4.6	2.6	3.0	2.6	2.9
Occupational Safety and Health Administration	4.3	6.0	4.2	3.6	3.4	0.7	2.0	1.9	1.7	1.8
Pension Benefit Guaranty Corp.	2.8	2.7	2.6	3.0	4.3	4.3	0.0	0.0	NA	NA
Department of State	3.3	2.2	1.5	NA	2.0	2.0	2.1	62.1	62.2	62.3
Department of Transportation	841.4	898.4	855.0	828.1	855.6	936.8	948.6	1,046.0	1,012.5	1,335.2
Federal Aviation Administration	329.6	329.3	291.8	280.4	313.4	403.3	398.5	375.4	387.0	692.1
Federal Highway Administration	344.1	403.3	397.4	397.6	313.0	332.2	351.7	490.6	451.6	417.7
Federal Motor Carrier Safety Administration	6.3	7.3	7.8	7.5	7.6	10.6	11.7	9.3	7.8	11.1
Federal Railroad Administration	44.4	39.6	50.5	40.0	44.2	41.4	44.3	46.7	39.4	38.3
Federal Transit Administration	23.8	25.5	16.4	8.2	81.7	35.3	55.4	10.2	2.8	20.0
National Highway Traffic Safety Administration	71.0	68.7	64.8	65.1	62.5	86.6	69.0	76.0	76.3	74.2
Office of the Secretary of Transportation	9.3	8.9	10.9	15.1	11.5	17.9	11.1	16.4	19.8	27.0
Pipeline and Hazardous Materials Safety Administration	7.9	11.0	10.7	14.2	21.8	9.6	7.0	21.6	27.8	54.8
Research and Innovative Technology Administration	5.1	4.9	4.7	na	na	na	na	na	na	na
Department of the Treasury	77.6	75.6	74.1	74.0	73.1	85.2	8.2	37.7	57.1	60.6
Bureau of Engraving and Printing	5.8	5.0	9.4	9.4	9.5	18.8	6.9	37.7	57.0	60.4
Internal Revenue Service	70.8	69.0	64.5	64.0	63.6	64.6	0.0	0.0	0.0	0.0
U.S. Mint	1.0	1.6	0.2	0.6	*	1.8	1.3	0.0	0.2	0.2
Department of Veterans Affairs	612.9	614.8	639.0	588.8	661.6	695.2	682.3	1,349.0	1,507.9	1,602.7
Other agencies										
Administrative Office of the U.S. Courts	NA	NA	NA	NA	NA	6.8	8.0	6.8	6.4	7.7
Agency for International Development	119.2	77.4	125.5	59.9	212.2	192.8	192.2	166.6	220.6	220.6
Appalachian Regional Commission	0.4	0.6	0.2	0.6	0.4	0.9	0.1	0.5	0.9	0.0
Consumer Product Safety Commission	NA	2.0	1.3	1.8	2.0	2.0	1.9	1.0	0.9	0.2
Environmental Protection Agency	577.0	576.3	522.8	530.9	515.6	508.0	493.6	487.4	485.3	488.5
Federal Communications Commission	3.7	4.0	5.2	6.7	4.8	5.1	7.2	5.5	2.0	1.8
Federal Trade Commission	2.7	2.9	2.7	2.5	1.9	3.0	5.7	5.8	6.0	7.3
Library of Congress	1.5	1.1	1.3	1.2	1.3	1.7	1.9	3.3	1.9	2.7
National Aeronautics and Space Administration	6,570.5	10,660.5	10,368.1	10,753.6	11,360.7	12,403.8	12,594.6	10,716.7	13,570.1	13,400.4

TABLE 105

Federal obligations for research and development, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
National Archives and Records Administration	3.1	2.0	1.1	0.9	0.7	0.7	0.5	0.5	0.5	0.0
National Science Foundation	5,145.6	5,169.8	4,955.9	5,403.3	5,669.7	5,589.4	5,517.6	5,849.5	5,996.1	6,156.6
Nuclear Regulatory Commission	83.8	82.6	75.9	85.0	91.9	80.6	67.4	77.7	74.9	65.3
Patient-Centered Outcomes Research Trust Fund	41.1	41.1	334.4	282.6	152.1	114.9	883.9	491.7	578.4	540.7
Smithsonian Institution	193.1	197.0	195.0	194.9	195.7	206.2	207.9	227.9	236.4	241.4
Social Security Administration	53.0	64.9	56.7	59.6	58.9	129.0	109.5	71.6	146.2	131.8
Tennessee Valley Authority	NA	NA	NA	NA	NA	NA	5.6	13.2	9.7	8.2
U.S. Agency for Global Media	NA	NA	NA	NA	NA	NA	NA	NA	6.1	6.2
U.S. Postal Service	NA	NA	NA	NA	28.0	29.4	73.3	53.2	26.7	26.6

* = amount greater than \$0 but less than \$50,000. na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. Beginning with FY 2016, the totals reported for development obligations represent a refinement to this category by more narrowly defining it to be "experimental development." Most notably, totals for development do not include the Department of Defense (DOD) Budget Activity 7 (Operational Systems Development) obligations. Those funds, previously included in DOD's development obligation totals, support the development efforts to upgrade systems that have been fielded or have received approval for full-rate production and anticipate production funding in the current or subsequent fiscal year. Therefore, the data are not directly comparable with totals reported in previous years. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 106

Federal obligations for R&D plant, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All agencies	4,492.8	4,069.8	4,304.7	4,266.5	3,994.2	3,771.1	2,124.8	2,168.4	1,943.9	3,668.0	6,613.3
Departments											
Department of Agriculture	86.6	117.0	118.8	96.4	179.4	134.2	172.6	123.9	43.9	77.5	251.2
Agricultural Research Service	74.6	104.0	103.8	81.2	160.5	119.1	159.1	98.9	23.0	46.0	181.3
Forest Service	12.0	13.0	15.0	15.2	18.9	15.2	13.5	25.0	20.9	31.5	69.8
Department of Commerce	200.5	23.8	29.1	59.1	89.7	60.8	74.6	117.7	151.6	386.4	408.8
Economic Development Administration	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.5	25.4	12.1
National Institute of Standards and Technology	200.5	23.8	29.1	49.1	37.4	44.3	43.3	51.5	86.9	105.3	237.3
National Oceanic and Atmospheric Administration	0.0	0.1	0.0	10.0	52.3	16.5	31.3	66.2	46.2	255.8	159.3
Department of Defense	48.2	147.4	365.1	251.4	274.7	272.8	63.3	79.3	163.4	117.2	152.8
Defense agencies and activities	5.1	4.7	284.1	137.9	121.1	82.1	34.8	36.3	41.1	0.9	0.3
Department of the Air Force	5.5	31.9	23.5	6.8	19.5	107.0	11.3	28.0	106.6	101.0	127.2
Department of the Army	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Navy	37.5	110.7	57.5	106.6	134.1	83.7	17.2	15.1	15.6	15.3	25.3
Department of Energy	810.8	983.4	1,028.0	1,024.1	1,006.8	863.3	778.2	752.4	751.6	1,672.3	959.3
Energy Efficiency and Renewable Energy	na	NA	4.9	6.2	19.8	19.4	26.1	107.0	64.9	207.1	102.9
Fossil Energy	NA	NA	10.2	4.5	6.2	6.3	19.4	12.0	13.1	19.0	19.0
National Nuclear Security Administration	NA	NA	425.8	447.9	436.1	303.1	304.6	191.9	263.1	168.3	190.0
Defense Programs	NA	NA	397.3	419.9	407.8	268.4	271.6	171.0	232.0	132.0	159.2
Fissile Materials Disposition	NA	NA	*	*	0.0	0.0	0.0	0.0	NA	NA	NA
Naval Nuclear Propulsion Program	NA	NA	28.5	28.0	28.4	34.7	33.0	20.9	31.1	36.3	30.8
Office of Science	NA	NA	587.1	565.5	544.7	534.4	428.1	441.5	410.5	1,277.9	647.4
Department of Health and Human Services	219.6	300.0	247.5	815.7	430.6	427.0	360.9	254.6	147.4	151.9	1,682.4
Centers for Disease Control and Prevention	0.0	0.0	0.0	0.0	0.0	0.0	143.9	134.4	6.5	0.0	0.0
Food and Drug Administration	2.5	8.8	13.4	7.2	8.5	0.7	3.9	8.4	5.1	4.8	12.6
Health Resources and Services Administration	0.6	0.6	0.6	0.3	0.6	0.5	0.6	0.6	0.6	0.6	0.6
National Institutes of Health	216.5	290.6	233.4	808.2	421.4	425.7	212.6	111.1	135.1	146.5	1,669.1
Department of Homeland Security	na	na	na	NA	117.2	91.7	131.8	243.6	219.6	311.1	457.7
Science and Technology Directorate	na	na	na	NA	116.3	90.7	131.4	243.0	219.1	309.6	456.6
U.S. Coast Guard	na	na	na	NA	1.0	1.0	0.3	0.6	0.5	1.5	1.1
Department of the Interior	1.3	2.4	2.1	3.6	7.9	7.5	5.5	9.6	9.1	6.4	6.3
Bureau of Ocean Energy Management, Regulation and Enforcement	1.3	2.4	2.1	2.1	2.6	2.9	3.2	2.6	2.8	1.9	2.7
Bureau of Reclamation	0.0	0.0	0.0	1.5	5.3	4.6	2.2	7.0	6.3	4.6	3.6
Department of Justice	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	1.0	0.0	0.0
Office of Justice Programs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	1.0	0.0	0.0
Department of Transportation	11.9	16.0	51.7	18.5	17.7	18.3	18.7	19.8	19.1	20.3	21.1

TABLE 106

Federal obligations for R&D plant, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Federal Aviation Administration	11.5	13.7	14.5	17.6	16.4	17.2	16.9	17.9	17.2	18.4	18.4
Federal Railroad Administration	0.1	2.1	0.9	0.9	1.3	1.1	1.8	1.9	1.9	1.9	2.7
Transportation Security Administration	na	na	36.0	na	na	na	na	na	na	na	na
U.S. Coast Guard	0.3	0.3	0.3	na	na	na	na	na	na	na	na
Department of the Treasury	0.1	0.0	0.0	0.0	0.0	0.0	3.7	1.6	0.0	0.0	0.0
U.S. Customs Service	0.1	0.0	0.0	na	na	na	na	na	na	na	na
U.S. Mint	0.0	0.0	0.0	0.0	0.0	0.0	3.7	1.6	0.0	0.0	0.0
Department of Veterans Affairs	0.3	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.0	0.0
Other agencies											
Environmental Protection Agency	21.0	22.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
General Services Administration	0.0	*	0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA
National Aeronautics and Space Administration	2,873.0	2,169.3	2,218.3	1,659.2	1,471.6	1,533.7	39.0	79.6	19.7	20.6	1,570.1
National Science Foundation	216.6	285.2	240.8	335.2	395.4	355.5	448.9	436.8	371.1	829.6	1,057.7
Smithsonian Institution	3.0	3.0	3.0	3.0	2.8	6.1	27.4	41.0	46.0	74.7	46.0

* = amount greater than \$0 but less than \$50,000. na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 107

Federal obligations for R&D plant, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
All agencies	4,170.7	2,145.7	1,905.1	2,217.6	2,825.1	2,441.0	2,651.8	3,852.7	4,376.4	4,759.0
Departments										
Department of Agriculture	35.5	16.3	12.1	10.8	10.9	22.6	156.8	44.1	29.0	430.0
Agricultural Research Service	18.6	4.9	2.6	1.4	1.0	7.5	147.3	28.4	19.4	428.0
Forest Service	17.0	9.8	7.9	7.5	7.9	13.0	9.3	15.6	9.6	2.0
Grain Inspection, Packers, and Stockyards Administration	0.0	1.7	1.6	1.9	2.0	2.0	0.2	na	na	na
Department of Commerce	241.7	175.9	201.7	192.7	188.1	284.7	234.6	393.5	464.3	618.5
Economic Development Administration	14.9	NA	NA	NA	NA	NA	NA	NA	NA	NA
National Institute of Standards and Technology	90.1	35.4	73.6	63.4	39.7	121.2	90.9	105.0	119.0	372.0
National Oceanic and Atmospheric Administration	136.7	140.6	128.1	129.3	148.4	163.5	143.7	288.5	345.4	246.5
Department of Defense	170.3	169.5	97.0	148.1	169.5	178.1	291.2	470.8	609.7	305.6
Department of the Air Force	141.4	143.1	75.5	120.6	123.0	119.5	225.0	210.1	192.6	160.4
Department of the Army	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0
Department of the Navy	21.5	24.8	20.5	23.5	35.7	38.0	48.5	78.9	143.2	134.3
Other defense agencies	7.4	1.6	1.0	4.0	10.7	19.4	17.7	181.9	273.9	10.9
Department of Energy	734.6	683.2	556.1	770.5	952.0	1,134.7	1,275.5	2,061.8	2,245.5	2,403.1
Energy Efficiency and Renewable Energy	39.3	0.0	4.4	3.6	3.6	3.6	3.6	227.0	305.5	418.6
Fossil Energy	19.0	16.0	15.2	16.0	15.8	0.0	15.8	21.3	23.0	29.0
National Nuclear Security Administration	128.0	92.8	74.8	115.5	256.3	250.7	305.2	473.6	337.3	292.5
Defense Programs	95.5	52.9	74.7	93.8	101.2	90.9	105.1	259.4	337.3	281.5
Naval Nuclear Propulsion Program	32.5	39.9	0.1	21.8	155.1	159.8	200.1	214.2	0.0	0.0
Office of Defense Nuclear Nonproliferation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0
Nuclear Energy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65.0
Office of Science	548.3	574.5	461.7	635.3	676.4	880.3	951.0	1,339.9	1,579.7	1,598.1
Department of Health and Human Services	79.2	140.2	130.3	143.0	153.4	151.0	127.6	204.5	243.0	265.0
Food and Drug Administration	8.5	6.3	3.7	6.0	6.7	5.4	4.6	7.5	26.0	35.0
Health Resources and Services Administration	0.6	0.6	0.7	0.7	0.7	0.7	0.0	0.0	0.0	0.0
National Institutes of Health	70.1	133.2	126.0	136.3	146.0	145.0	123.0	197.0	217.0	230.0
Department of Homeland Security	568.5	230.4	327.9	361.1	902.9	117.0	13.3	1.3	1.3	0.0
Science and Technology Directorate	567.2	229.3	326.8	359.8	901.7	115.8	12.0	0.0	0.0	0.0
U.S. Coast Guard	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	0.0
Department of the Interior	10.5	4.9	8.0	4.8	8.6	3.3	5.4	3.0	4.6	8.4
Bureau of Ocean Energy Management, Regulation and Enforcement	6.9	na	na	na	na	na	na	na	na	na
Bureau of Reclamation	3.7	2.1	3.0	2.2	2.9	1.2	1.2	1.2	1.2	1.2
Bureau of Safety and Environmental Enforcement	na	2.9	5.0	2.7	5.7	2.2	4.3	1.8	3.5	7.2
Department of Transportation	20.4	37.7	20.9	19.6	28.9	24.7	38.4	30.6	39.3	49.4

TABLE 107

Federal obligations for R&D plant, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
Federal Aviation Administration	17.7	31.2	18.7	16.5	26.3	22.5	36.8	28.3	37.3	47.7
Federal Railroad Administration	2.7	6.5	2.2	3.1	2.6	2.2	1.6	2.3	2.0	1.7
Department of the Treasury	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	1.3
Bureau of Engraving and Printing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.0
U.S. Mint	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.3
Other agencies										
Environmental Protection Agency	4.7	4.9	7.0	7.1	5.1	5.3	4.8	4.7	4.7	4.5
National Aeronautics and Space Administration	1,858.5	97.8	126.2	127.0	52.4	57.9	43.4	97.2	46.2	86.3
National Science Foundation	391.0	535.6	372.6	396.9	320.0	432.9	428.1	508.6	652.1	554.3
Smithsonian Institution	55.7	49.2	45.3	36.0	33.2	28.8	32.7	32.7	32.6	32.6

na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 108

Federal obligations for research, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All agencies	38,470.6	44,713.7	48,006.7	51,071.8	53,357.8	53,738.2	53,535.7	54,093.6	53,893.7	63,691.9	63,728.0
Departments											
Department of Agriculture	1,611.5	1,803.7	1,810.4	1,869.1	1,918.8	2,002.8	2,030.5	2,067.7	2,019.5	2,075.5	2,141.0
Agricultural Marketing Service	4.3	4.1	4.4	4.1	7.9	7.7	6.3	6.4	2.5	2.1	2.2
Agricultural Research Service	805.1	904.9	964.4	966.4	988.3	997.0	1,021.4	1,027.8	1,010.3	1,027.1	1,060.5
Economic Research Service	64.2	65.6	67.0	68.4	70.8	74.0	75.0	92.0	77.8	78.9	86.4
Food Safety and Inspection Service	2.0	2.2	NA	NA	NA	NA	NA	NA	NA	NA	NA
Foreign Agricultural Service	1.4	1.4	1.4	1.6	1.6	1.5	0.9	0.6	0.4	0.4	0.4
Forest Service	191.8	203.8	217.6	251.1	254.6	254.6	264.0	279.8	255.7	297.6	283.4
Grain Inspection, Packers, and Stockyards Administration	0.7	0.0	0.0	0.0	0.0	6.7	7.1	6.7	6.6	6.5	6.3
National Agricultural Statistics Service	3.9	4.2	4.6	5.5	6.1	6.1	6.5	6.8	6.9	7.2	7.5
National Institute of Food and Agriculture	535.0	615.1	546.7	568.1	585.7	651.6	645.1	626.6	655.1	651.5	689.6
Rural Business-Cooperative Service	3.1	2.4	4.2	3.8	3.8	3.6	4.1	21.0	4.2	4.1	4.8
Department of Commerce	895.9	828.3	994.5	1,054.1	887.9	889.4	840.2	928.5	964.0	959.1	1,135.1
Economic Development Administration	0.6	0.6	0.5	0.5	0.2	0.5	0.2	0.8	2.2	2.9	6.8
National Institute of Standards and Technology	308.6	336.8	354.6	381.0	359.7	357.6	355.5	415.3	406.8	479.3	653.3
National Oceanic and Atmospheric Administration	578.5	478.9	629.3	665.6	519.9	520.3	471.8	500.1	542.7	463.8	458.0
National Telecommunications and Information Administration	4.0	4.2	4.1	6.4	6.3	6.9	6.7	7.0	7.0	6.9	7.6
U.S. Census Bureau	4.3	7.9	6.0	0.6	1.8	4.2	6.0	5.3	5.3	6.2	9.4
Department of Defense	4,920.4	6,806.2	6,265.4	5,815.6	5,697.9	5,931.5	5,751.9	6,393.9	6,580.8	6,792.0	7,065.5
Defense agencies and activities	1,899.3	2,504.3	2,653.5	2,212.1	1,878.6	1,752.0	1,740.6	1,866.7	2,030.8	2,206.9	2,443.5
Department of the Air Force	1,096.5	2,190.9	1,357.4	1,329.4	1,210.5	1,246.4	1,351.1	1,540.1	1,591.8	1,604.2	1,678.3
Department of the Army	970.9	1,088.0	1,111.5	1,117.5	1,471.1	1,700.2	1,452.6	1,721.3	1,631.1	1,667.0	1,675.2
Department of the Navy	953.7	1,023.0	1,142.9	1,156.6	1,137.7	1,232.9	1,207.6	1,265.8	1,327.2	1,313.9	1,268.5
Department of Education	163.5	183.2	183.6	201.6	210.8	214.0	215.6	211.5	204.1	202.6	225.2
Department of Energy	4,100.9	4,593.2	5,062.5	5,260.6	5,498.0	5,703.8	5,720.3	5,856.5	6,099.6	7,188.1	7,598.3
Advanced Research Projects Agency—Energy	na	na	na	na	na	na	na	na	0.0	0.0	205.1
Bonneville Power Administration	NA	NA	14.3	14.7	15.4	8.9	9.8	8.7	11.2	7.3	11.8
Civilian Radioactive Waste Management	NA	NA	62.5	75.8	78.9	53.5	52.9	10.5	1.4	0.1	0.0
Electricity Delivery and Energy Reliability	na	na	na	na	na	66.5	93.4	57.3	27.3	61.7	73.5
Energy Efficiency and Renewable Energy	na	NA	293.6	310.5	266.9	271.8	211.3	342.9	429.1	653.4	911.7
Environmental Management	NA	NA	86.9	20.8	12.8	14.9	10.2	2.4	2.3	10.9	30.8
Fossil Energy	NA	NA	145.0	255.8	231.2	216.0	218.1	216.8	183.0	246.1	218.1
National Nuclear Security Administration	NA	NA	2,072.6	2,158.3	2,200.4	2,277.4	2,218.7	2,154.4	2,178.1	2,061.4	1,951.4
Defense Programs	NA	NA	1,893.9	2,009.9	2,105.8	2,193.4	2,076.2	2,028.4	1,967.1	1,795.8	1,710.3
Office of Defense Nuclear Nonproliferation	NA	NA	178.7	148.5	94.6	84.0	142.5	126.0	211.0	265.6	241.1

TABLE 108

Federal obligations for research, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Nuclear Energy	NA	NA	42.5	29.4	69.4	83.2	87.5	71.0	130.1	116.0	300.9
Office of Science	NA	NA	2,345.1	2,395.3	2,623.1	2,711.5	2,818.3	2,992.5	3,137.3	4,031.2	3,895.1
Department of Health and Human Services	17,913.1	20,648.7	23,230.9	26,287.8	27,991.2	28,617.1	28,679.6	29,210.7	29,459.2	35,489.9	35,797.5
Administration for Children and Families	27.3	28.4	23.3	20.9	20.1	38.6	14.4	11.8	19.4	14.0	6.8
Administration for Community Living	2.8	3.7	3.7	0.0	3.0	2.9	2.9	0.0	0.0	0.0	0.0
Agency for Healthcare Research and Quality	186.8	248.1	274.8	284.0	279.4	293.2	293.2	293.4	307.6	347.8	789.3
Agency for Toxic Substances and Disease Registry	14.7	13.1	12.4	14.3	10.7	9.4	9.0	4.2	4.3	4.5	2.8
Centers for Disease Control and Prevention	505.0	544.0	521.0	564.0	539.8	510.8	544.6	527.2	511.3	389.4	409.7
Centers for Medicare and Medicaid Services	61.5	138.0	117.0	73.6	77.6	77.3	62.4	57.3	31.1	30.1	81.7
Food and Drug Administration	144.2	151.6	136.3	138.3	132.3	142.1	143.3	129.3	137.9	166.4	210.6
Health Resources and Services Administration	35.6	16.1	17.3	16.5	16.9	17.6	17.3	16.8	21.7	23.4	29.6
National Institutes of Health	16,918.3	19,480.7	22,110.1	25,156.4	26,890.4	27,500.3	27,565.6	28,146.3	28,404.4	34,494.3	34,212.6
Office of the Secretary of Health and Human Services	16.7	24.9	14.9	19.9	21.1	24.8	26.8	24.5	21.5	20.0	54.4
Office of the Assistant Secretary for Planning and Evaluation	16.7	24.9	14.9	19.9	21.1	24.8	26.8	24.5	21.5	20.0	54.4
Department of Homeland Security	na	na	na	NA	413.4	597.2	606.2	541.8	325.4	347.2	321.5
Science and Technology Directorate	na	na	na	NA	284.5	411.0	595.6	535.8	318.1	340.5	313.9
Transportation Security Administration	na	na	na	NA	122.8	180.5	2.6	0.0	0.0	0.0	NA
U.S. Coast Guard	na	na	na	NA	5.1	4.6	7.1	5.2	6.6	6.7	7.6
U.S. Secret Service	na	na	na	NA	1.0	1.0	1.0	0.8	0.7	NA	NA
Department of Housing and Urban Development	15.5	17.9	16.2	14.0	17.5	16.5	11.5	14.0	10.4	11.7	38.8
Department of the Interior	548.5	572.8	557.4	533.5	546.6	531.3	551.1	553.7	566.1	657.6	644.0
Bureau of Ocean Energy Management, Regulation and Enforcement	29.2	24.5	31.2	26.7	27.2	27.1	28.9	25.0	32.4	35.7	43.4
Bureau of Reclamation	7.4	7.3	3.6	3.3	3.8	4.4	3.1	3.0	3.1	3.0	7.3
National Park Service	34.7	10.0	17.6	6.5	11.5	3.2	3.7	7.0	6.6	11.3	6.4
U.S. Geological Survey	477.1	531.1	504.9	497.0	504.1	496.6	515.5	518.7	524.0	607.6	586.9
Department of Justice	49.6	61.8	49.2	56.6	47.1	57.6	53.0	62.5	77.5	80.9	87.5
Bureau of Prisons	3.4	8.5	3.6	4.8	5.0	4.4	2.7	4.2	3.0	2.8	2.8
Office of Justice Programs	46.1	53.3	45.5	51.9	42.1	53.3	50.2	58.3	74.5	78.1	84.6
Department of Labor	46.1	57.1	45.5	36.3	37.5	36.0	30.1	48.0	40.9	29.2	11.9
Bureau of Labor Statistics	12.3	21.5	20.7	20.6	22.4	22.5	22.8	23.7	24.2	0.0	NA
Employee Benefits Security Administration	2.7	3.3	2.7	2.7	2.5	2.7	2.6	1.8	2.2	2.2	5.8
Employment and Training Administration	25.0	25.0	17.8	9.0	9.0	6.7	0.7	18.8	10.7	22.4	NA
Occupational Safety and Health Administration	5.8	5.7	3.8	3.1	3.4	3.4	3.5	3.4	3.6	4.5	5.9
Office of the Secretary of Labor	0.3	1.5	0.3	0.8	0.1	0.5	0.3	0.3	0.0	0.0	0.0
Pension Benefit Guaranty Corp.	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Department of State	1.5	2.2	2.3	2.3	3.0	3.3	4.2	3.8	3.7	3.7	2.9

TABLE 108

Federal obligations for research, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Department of Transportation	344.4	445.7	530.9	432.9	360.2	254.6	535.2	589.5	634.1	586.7	645.9
Federal Aviation Administration	164.4	186.1	244.8	135.6	118.3	128.3	136.6	128.2	140.4	162.9	236.6
Federal Highway Administration	92.9	158.3	138.6	192.8	201.9	51.7	288.4	348.3	347.3	316.8	295.9
Federal Motor Carrier Safety Administration	2.8	8.0	0.2	6.8	6.4	6.6	5.3	9.4	8.4	6.9	6.6
Federal Railroad Administration	24.2	23.8	29.7	28.7	24.3	25.7	40.8	31.5	37.5	8.3	9.7
Federal Transit Administration	0.0	0.0	0.6	0.0	*	0.3	3.6	2.8	3.6	4.2	20.0
National Highway Traffic Safety Administration	50.6	58.3	59.6	65.4	6.7	40.1	57.5	64.1	83.3	82.0	70.8
Pipeline and Hazardous Materials Safety Administration	na	na	na	na	2.6	1.8	2.2	3.6	2.8	2.1	2.1
Research and Innovative Technology Administration	na	na	na	na	0.0	0.1	0.7	1.7	10.7	3.7	4.2
Research and Special Programs Administration	4.5	5.2	3.7	3.5	na	na	na	na	na	na	na
Transportation Security Administration	na	na	47.2	na	na	na	na	na	na	na	na
U.S. Coast Guard	5.0	5.9	6.4	na	na	na	na	na	na	na	na
Department of the Treasury	51.2	63.2	61.8	58.7	61.3	63.4	60.7	59.3	64.5	67.0	68.4
Bureau of Engraving and Printing	2.7	4.7	5.3	4.3	4.0	5.6	5.3	4.4	4.9	2.1	1.0
Internal Revenue Service	47.4	56.6	55.5	54.4	57.3	57.8	55.4	54.8	59.6	64.9	66.3
Office of Thrift Supervision	0.1	0.1	0.1	0.0	NA	NA	NA	NA	NA	NA	NA
U.S. Customs Service	0.0	1.0	*	na	na	na	na	na	na	na	na
U.S. Mint	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
U.S. Secret Service	1.0	0.7	0.8	na	na	na	na	na	na	na	na
Department of Veterans Affairs	334.6	338.1	314.3	349.6	383.9	382.7	391.9	424.7	456.6	477.3	529.0
Other agencies											
Agency for International Development	189.2	239.2	247.6	262.4	241.4	216.7	215.0	234.5	123.8	160.1	84.3
Appalachian Regional Commission	0.6	0.7	0.7	0.7	0.6	0.8	1.0	0.8	0.8	1.0	0.6
Consumer Product Safety Commission	0.0	0.1	0.0	0.0	NA	NA	NA	NA	NA	NA	NA
Environmental Protection Agency	410.7	350.7	323.7	461.8	536.8	525.4	504.8	492.2	450.2	468.1	484.8
Federal Communications Commission	2.8	2.7	4.4	4.5	4.1	5.1	7.1	6.4	6.7	6.9	3.7
Federal Trade Commission	0.7	0.7	1.8	2.3	1.6	1.2	1.6	1.5	2.6	2.4	3.0
Library of Congress	0.6	2.0	1.7	0.5	16.4	1.6	3.3	0.5	0.5	0.5	0.7
National Aeronautics and Space Administration	3,964.0	4,471.8	4,838.5	4,553.5	4,499.4	3,729.0	3,271.8	2,131.8	1,405.7	1,703.5	1,502.8
National Archives and Records Administration	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	4.6	4.6	4.6
National Science Foundation	2,725.5	3,043.5	3,260.0	3,608.6	3,770.7	3,742.9	3,790.6	3,970.1	4,135.2	6,095.2	5,015.7
Nuclear Regulatory Commission	53.0	53.0	74.3	64.0	72.1	70.1	71.4	76.5	61.0	61.2	85.4
Smithsonian Institution	98.0	98.0	106.0	104.0	108.0	109.0	119.0	145.0	142.0	152.0	167.0
Social Security Administration	28.8	28.9	22.8	36.8	30.4	35.1	67.8	68.2	54.1	67.9	63.0
U.S. Agency for Global Media	0.1	*	0.3	0.0	1.0	0.2	0.2	NA	NA	NA	NA

* = amount greater than \$0 but less than \$50,000. na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):
Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):
National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 109

Federal obligations for research, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
All agencies	58,064.8	61,986.3	59,532.6	63,191.4	63,825.4	67,104.6	69,871.3	74,587.6	81,117.8	85,262.4
Departments										
Department of Agriculture	2,125.4	1,964.0	1,867.9	2,059.7	2,128.4	2,155.9	2,216.3	2,256.6	2,407.0	2,689.3
Agricultural Marketing Service	2.1	2.1	2.5	2.9	3.4	3.3	3.6	3.6	3.9	3.5
Agricultural Research Service	1,019.7	980.8	912.9	1,009.6	1,018.4	1,030.0	1,053.3	1,080.5	1,163.1	1,272.6
Animal and Plant Health Inspection Service	0.0	0.0	17.7	19.0	19.5	19.6	18.8	18.1	18.8	18.9
Economic Research Service	81.1	77.2	71.0	77.6	85.1	85.1	86.4	86.5	85.6	85.3
Foreign Agricultural Service	0.6	0.7	0.7	0.2	0.6	0.2	0.2	0.0	0.0	0.5
Forest Service	281.9	272.1	301.2	276.5	260.2	281.4	270.7	253.5	255.0	259.2
Grain Inspection, Packers, and Stockyards Administration	6.7	5.0	4.7	5.7	6.0	6.0	0.2	na	na	na
National Agricultural Statistics Service	7.4	7.4	7.5	5.4	5.4	5.4	5.4	5.3	5.3	5.4
National Institute of Food and Agriculture	724.1	614.2	546.1	657.0	726.1	721.3	774.4	804.9	871.4	1,040.0
Rural Business-Cooperative Service	1.7	4.5	3.6	5.8	3.5	3.6	3.3	4.2	3.9	3.9
Department of Commerce	941.0	988.5	1,023.2	1,277.3	1,153.9	1,152.9	1,302.3	1,228.8	1,281.9	1,370.4
Economic Development Administration	0.6	NA	NA	NA	NA	NA	NA	NA	NA	NA
National Institute of Standards and Technology	473.0	507.5	526.0	599.4	631.2	624.8	690.6	675.9	703.0	747.9
National Oceanic and Atmospheric Administration	448.8	396.1	374.9	441.8	470.0	427.7	547.4	488.2	541.8	575.8
National Telecommunications and Information Administration	7.8	7.6	7.3	9.6	12.3	10.6	8.2	9.0	7.9	8.2
U.S. Census Bureau	10.8	77.3	115.0	226.5	40.5	89.8	56.1	55.8	29.2	38.5
Department of Defense	6,595.7	6,662.5	5,955.3	6,704.4	6,691.5	7,152.0	7,178.0	7,652.7	8,268.4	8,464.9
Defense Advanced Research Projects Agency	1,384.0	1,496.3	1,267.9	1,536.5	1,484.9	1,535.9	1,509.4	1,680.0	1,743.3	1,994.8
Department of the Air Force	1,673.9	1,726.0	1,502.3	1,573.5	1,609.2	1,762.5	1,713.3	1,904.8	2,106.9	2,164.8
Department of the Army	1,478.5	1,333.1	1,256.9	1,418.3	1,390.5	1,522.2	1,683.6	1,689.1	1,956.2	1,812.8
Department of the Navy	1,295.4	1,413.9	1,295.7	1,482.9	1,465.1	1,560.5	1,539.8	1,549.4	1,590.7	1,546.8
Other defense agencies	763.9	693.2	632.5	693.2	741.8	771.0	732.1	829.4	871.3	945.8
Department of Education	213.0	208.4	202.1	208.4	159.8	163.3	174.1	189.9	188.7	191.3
Department of Energy	7,350.1	7,361.3	7,333.3	8,091.7	8,641.5	9,465.2	9,584.5	10,508.2	11,369.7	12,681.7
Advanced Research Projects Agency—Energy	127.8	56.4	92.0	150.0	138.9	172.1	150.6	80.0	202.5	212.5
Bonneville Power Administration	5.3	5.3	12.5	7.3	6.8	6.8	9.2	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	61.8	64.0	53.5	65.2	63.1	69.3	80.4	94.1	87.0	83.3
Energy Efficiency and Renewable Energy	467.5	441.2	529.8	540.1	472.6	576.4	853.0	1,284.9	1,270.3	1,546.4
Environmental Management	22.3	14.7	3.0	16.2	8.3	9.8	10.4	12.5	8.6	3.8
Fossil Energy	184.8	165.1	154.0	161.7	198.8	231.3	229.7	661.6	659.0	680.0
National Nuclear Security Administration	2,250.4	2,338.8	2,404.3	2,770.0	2,704.9	3,209.6	3,078.1	2,644.8	3,670.1	4,370.8
Defense Programs	1,974.7	2,143.4	2,148.2	2,519.4	2,526.7	3,010.1	2,880.9	2,421.7	3,434.1	4,131.0
Office of Defense Nuclear Nonproliferation	275.6	195.4	256.1	250.6	178.2	199.5	197.2	223.1	236.0	239.8

TABLE 109

Federal obligations for research, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
Nuclear Energy	326.8	336.4	236.1	295.9	639.3	665.5	688.5	762.7	378.3	435.4
Office of Cybersecurity, Energy Security, and Emergency Response	na	na	na	na	na	na	na	0.0	40.0	24.6
Office of Science	3,903.5	3,939.5	3,848.2	4,085.1	4,409.0	4,524.5	4,484.7	4,967.7	5,053.9	5,324.9
Department of Health and Human Services	30,770.7	31,124.2	29,314.6	30,587.3	30,196.7	32,128.6	33,677.4	36,801.5	38,354.4	40,743.0
Administration for Children and Families	9.6	8.4	2.4	3.2	2.2	3.1	2.4	3.0	2.3	1.6
Administration for Community Living	0.0	0.0	0.0	0.0	72.5	66.1	66.3	65.6	65.9	71.8
Agency for Healthcare Research and Quality	341.0	336.5	335.8	335.0	335.0	306.2	300.1	306.1	308.1	308.1
Agency for Toxic Substances and Disease Registry	5.1	1.4	1.1	1.4	1.8	2.2	2.8	2.8	7.0	7.0
Centers for Disease Control and Prevention	347.6	481.0	334.3	379.2	460.4	493.6	436.1	386.2	365.9	351.9
Centers for Medicare and Medicaid Services	35.4	21.0	20.0	33.6	24.0	29.5	28.9	230.7	133.5	136.0
Food and Drug Administration	225.2	352.6	360.6	389.1	375.7	485.9	375.0	477.6	493.1	495.0
Health Resources and Services Administration	26.7	26.9	26.5	27.7	27.3	26.1	29.8	36.3	32.6	31.5
National Institutes of Health	29,760.2	29,876.8	28,215.3	29,399.6	28,880.0	30,698.0	32,419.0	35,276.0	36,929.0	39,323.0
Office of the Secretary of Health and Human Services	19.9	19.5	18.6	18.6	18.0	18.0	16.9	17.1	17.0	17.0
Office of the Assistant Secretary for Planning and Evaluation	19.9	19.5	18.6	18.6	18.0	18.0	16.9	17.1	17.0	17.0
Department of Homeland Security	248.1	306.6	140.7	256.1	216.9	207.6	275.9	369.3	279.5	232.9
Countering Weapons of Mass Destruction Office	NA	NA	NA	79.3	37.3	37.7	34.2	14.2	31.2	24.0
Cybersecurity and Infrastructure Security Agency	na	na	na	na	na	na	na	7.2	13.1	14.4
Science and Technology Directorate	241.0	294.4	133.7	168.4	173.1	162.8	235.3	341.5	229.4	193.0
U.S. Coast Guard	7.1	12.2	7.0	8.4	6.4	7.0	6.5	6.5	5.9	1.5
Department of Housing and Urban Development	48.8	63.1	44.1	36.5	38.2	42.9	41.2	40.3	61.0	88.6
Department of the Interior	629.5	624.5	603.3	649.3	680.3	726.0	721.9	649.5	689.8	717.9
Bureau of Indian Affairs	NA	NA	NA	NA	NA	NA	NA	5.0	5.0	5.0
Bureau of Land Management	NA	NA	NA	NA	15.4	17.0	17.0	13.7	13.7	13.7
Bureau of Ocean Energy Management	na	39.0	39.5	48.0	43.9	60.1	63.4	65.6	65.1	67.2
Bureau of Ocean Energy Management, Regulation and Enforcement	45.4	na	na	na	na	na	na	na	na	na
Bureau of Reclamation	8.6	7.5	7.5	9.0	7.3	18.6	22.8	16.8	16.5	17.5
Bureau of Safety and Environmental Enforcement	na	7.7	15.2	32.6	16.6	23.6	8.3	4.7	7.5	13.6
National Park Service	8.3	5.4	6.4	14.1	7.5	8.0	8.7	9.9	10.1	10.2
Office of Surface Mining Reclamation and Enforcement	NA	NA	NA	NA	NA	NA	NA	0.0	0.3	0.5
U.S. Fish and Wildlife Service	NA	NA	NA	NA	29.8	32.5	32.8	32.7	32.7	32.7
U.S. Geological Survey	567.2	564.9	534.6	545.5	559.7	566.2	569.0	501.2	538.8	557.5
Department of Justice	84.5	75.4	77.7	142.2	128.4	156.9	86.7	91.2	105.4	90.6
Bureau of Prisons	3.5	1.7	2.5	2.2	2.5	2.5	1.9	1.3	1.2	1.3
Federal Bureau of Investigation	8.1	6.9	6.6	0.0	0.0	0.0	0.0	2.9	1.0	1.0
Office of Justice Programs	72.9	66.8	68.6	140.0	125.8	154.3	84.8	87.0	103.1	88.3

TABLE 109

Federal obligations for research, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
Department of Labor	53.0	18.9	13.9	11.2	10.2	5.6	4.6	4.8	4.4	4.7
Employee Benefits Security Administration	48.5	12.8	9.6	7.5	6.5	4.6	2.6	3.0	2.6	2.9
Occupational Safety and Health Administration	4.3	6.0	4.2	3.6	3.4	0.7	2.0	1.9	1.7	1.8
Pension Benefit Guaranty Corp.	0.2	0.2	0.2	0.2	0.4	0.3	0.0	0.0	NA	NA
Department of State	3.3	2.2	1.5	NA	2.0	2.0	2.1	62.1	62.2	62.3
Department of Transportation	637.0	698.4	654.7	653.0	662.6	625.1	695.6	750.9	745.6	913.3
Federal Aviation Administration	210.1	216.4	196.9	197.5	207.2	207.5	212.3	194.8	193.1	348.2
Federal Highway Administration	299.8	348.9	327.3	338.8	273.2	247.2	305.4	419.6	414.9	391.9
Federal Motor Carrier Safety Administration	5.7	6.9	7.2	7.2	7.6	9.7	11.2	8.8	7.8	11.1
Federal Railroad Administration	20.3	27.5	39.5	29.8	32.9	30.7	34.1	32.6	31.9	32.2
Federal Transit Administration	23.3	24.8	13.6	8.2	72.4	35.3	55.4	10.2	2.8	20.0
National Highway Traffic Safety Administration	71.0	68.7	64.8	65.1	62.5	86.6	69.0	76.0	76.3	74.2
Office of the Secretary of Transportation	0.0	0.0	0.0	4.0	1.9	3.7	2.8	3.4	8.2	15.1
Pipeline and Hazardous Materials Safety Administration	3.4	2.0	2.0	2.4	4.8	4.6	5.4	5.7	10.6	20.5
Research and Innovative Technology Administration	3.4	3.3	3.4	na	na	na	na	na	na	na
Department of the Treasury	77.0	75.3	73.3	73.4	72.5	82.4	1.3	37.7	46.2	49.6
Bureau of Engraving and Printing	5.2	4.7	8.6	8.8	8.9	16.0	0.0	37.7	46.0	49.4
Internal Revenue Service	70.8	69.0	64.5	64.0	63.6	64.6	0.0	0.0	0.0	0.0
U.S. Mint	1.0	1.6	0.2	0.6	*	1.8	1.3	0.0	0.2	0.2
Department of Veterans Affairs	575.4	577.2	604.0	553.5	643.4	677.4	668.8	1,320.0	1,477.6	1,570.5
Other agencies										
Administrative Office of the U.S. Courts	NA	NA	NA	NA	NA	6.8	8.0	6.8	6.4	7.7
Agency for International Development	119.2	77.4	125.5	59.9	212.2	148.5	192.2	120.4	171.7	171.7
Appalachian Regional Commission	0.4	0.6	0.2	0.6	0.4	0.9	0.1	0.5	0.9	0.0
Consumer Product Safety Commission	NA	2.0	1.3	1.8	2.0	2.0	1.9	1.0	0.9	0.2
Environmental Protection Agency	491.4	490.6	446.2	453.5	440.4	430.0	417.5	412.9	404.8	411.9
Federal Communications Commission	3.7	4.0	5.2	6.7	4.8	5.1	6.1	4.8	2.0	1.8
Federal Trade Commission	2.7	2.9	2.7	2.5	1.9	3.0	5.7	5.8	6.0	7.3
Library of Congress	0.9	0.5	0.7	0.7	0.8	1.0	0.9	0.9	0.9	1.1
National Aeronautics and Space Administration	1,574.6	5,100.3	5,422.4	5,335.6	5,539.4	5,613.2	5,745.3	5,293.1	8,111.5	7,615.3
National Archives and Records Administration	3.1	2.0	1.1	0.9	0.7	0.7	0.5	0.5	0.5	0.0
National Science Foundation	5,145.6	5,169.8	4,955.9	5,403.3	5,669.7	5,589.4	5,517.6	5,849.5	5,996.1	6,156.6
Nuclear Regulatory Commission	83.8	82.6	75.9	85.0	91.9	80.6	67.4	77.7	74.9	65.3
Patient-Centered Outcomes Research Trust Fund	41.1	41.1	334.4	282.6	152.1	114.9	883.9	491.7	578.4	540.7
Smithsonian Institution	193.1	197.0	195.0	194.9	195.7	206.2	207.9	227.9	236.4	241.4
Social Security Administration	53.0	64.9	56.7	59.6	58.9	129.0	109.5	71.6	146.2	131.8

TABLE 109

Federal obligations for research, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
Tennessee Valley Authority	NA	NA	NA	NA	NA	NA	2.6	5.9	5.6	5.9
U.S. Agency for Global Media	NA	NA	NA	NA	NA	NA	NA	NA	6.1	6.2
U.S. Postal Service	NA	NA	NA	NA	28.0	29.4	73.3	53.2	26.7	26.6

* = amount greater than \$0 but less than \$50,000. na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 110

Federal obligations for basic research, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All agencies	19,569.8	21,958.1	23,668.3	24,751.4	26,120.7	27,140.3	26,584.6	26,865.8	27,154.0	32,879.4	31,795.3
Departments											
Department of Agriculture	807.9	903.1	930.1	961.6	919.9	953.7	945.8	937.5	883.4	930.2	982.2
Agricultural Research Service	477.7	546.9	582.9	584.1	538.0	542.8	556.1	559.6	550.1	570.6	589.1
Economic Research Service	6.4	6.6	6.7	6.8	7.1	7.4	7.5	8.6	4.4	8.0	1.9
Food Safety and Inspection Service	0.4	0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
Foreign Agricultural Service	0.8	0.8	0.8	0.9	0.4	0.4	0.2	0.2	0.1	0.1	0.1
Forest Service	91.4	97.2	103.7	119.7	121.4	121.4	125.9	87.9	82.7	105.4	99.2
Grain Inspection, Packers, and Stockyards Administration	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	6.6	6.5	6.3
National Agricultural Statistics Service	1.3	1.4	1.5	1.8	1.8	1.8	1.9	2.0	2.6	3.0	3.2
National Institute of Food and Agriculture	229.9	249.9	234.4	248.2	251.2	279.9	254.2	272.5	237.0	236.6	282.4
Department of Commerce	46.4	64.9	72.5	65.9	47.9	59.0	72.8	102.8	110.9	138.3	202.3
Economic Development Administration	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.9	1.6	5.5
National Institute of Standards and Technology	40.3	53.5	56.1	65.5	47.0	59.0	72.8	102.8	110.0	136.7	196.7
National Oceanic and Atmospheric Administration	4.3	8.2	13.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Census Bureau	1.8	3.3	2.8	0.3	0.9	0.0	0.0	0.0	0.0	0.0	0.0
Department of Defense	1,230.1	2,009.3	1,812.5	1,396.1	1,416.2	1,399.5	1,304.2	1,527.2	1,616.4	1,730.3	1,853.5
Defense agencies and activities	417.1	870.9	899.2	512.8	193.1	157.4	160.5	235.9	311.3	343.0	414.7
Department of the Air Force	253.4	536.2	299.0	238.2	319.2	369.6	350.6	422.3	399.9	432.1	475.7
Department of the Army	205.3	208.4	224.6	240.6	442.3	396.8	348.8	384.6	392.1	431.2	414.3
Department of the Navy	354.3	393.9	389.7	404.5	461.6	475.7	444.3	484.4	513.2	524.0	548.8
Department of Education	2.1	2.3	5.3	5.5	9.0	9.6	2.6	4.2	4.5	4.2	7.1
Department of Energy	2,175.8	2,295.5	2,477.8	2,446.9	2,662.6	2,746.5	2,834.6	3,007.6	3,180.4	4,061.0	3,969.5
Bonneville Power Administration	NA	NA	3.2	3.3	3.4	*	0.0	*	0.1	1.0	7.9
Electricity Delivery and Energy Reliability	na	na	na	na	na	0.0	0.0	0.0	0.0	0.0	7.3
Energy Efficiency and Renewable Energy	na	NA	60.1	30.6	22.6	22.7	1.2	0.6	12.2	2.3	20.7
Environmental Management	NA	NA	37.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fossil Energy	NA	NA	8.1	9.9	9.6	9.3	7.3	5.9	4.0	4.4	4.8
National Nuclear Security Administration	NA	NA	26.5	10.7	6.8	3.0	7.8	8.6	26.8	22.1	33.7
Office of Defense Nuclear Nonproliferation	NA	NA	26.5	10.7	6.8	3.0	7.8	8.6	26.8	22.1	33.7
Office of Science	NA	NA	2,342.1	2,392.4	2,620.2	2,711.5	2,818.3	2,992.5	3,137.3	4,031.2	3,895.1
Department of Health and Human Services	10,055.4	11,592.3	12,860.8	14,102.5	14,766.5	15,786.1	15,539.6	15,772.2	16,030.8	18,772.2	18,649.7
Agency for Healthcare Research and Quality	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Centers for Disease Control and Prevention	0.0	0.0	0.0	0.0	0.0	0.0	0.0	138.6	122.3	108.7	85.4
Health Resources and Services Administration	1.2	2.2	2.1	2.5	2.1	2.5	2.6	2.4	2.5	2.4	2.4
National Institutes of Health	10,054.1	11,590.2	12,843.8	14,100.0	14,764.5	15,783.6	15,537.0	15,631.2	15,906.0	18,661.0	18,561.9

TABLE 110

Federal obligations for basic research, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Office of the Secretary of Health and Human Services	0.0	0.0	14.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of the Assistant Secretary for Planning and Evaluation	0.0	0.0	14.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Department of Homeland Security	na	na	na	NA	166.5	55.1	79.8	56.7	245.7	101.3	100.3
Science and Technology Directorate	na	na	na	NA	85.1	55.1	79.8	56.7	245.6	101.3	100.3
Transportation Security Administration	na	na	na	NA	81.3	0.0	0.0	0.0	0.0	0.0	NA
U.S. Secret Service	na	na	na	NA	0.0	0.0	0.0	0.0	0.1	NA	NA
Department of the Interior	51.8	61.8	45.8	40.7	36.7	35.7	42.1	41.9	43.1	47.1	49.9
National Park Service	0.5	1.6	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Geological Survey	51.3	60.2	40.8	40.7	36.7	35.7	42.1	41.9	43.1	47.1	49.9
Department of Justice	21.7	25.0	25.4	31.2	14.5	17.5	18.1	24.0	0.0	9.3	13.0
Office of Justice Programs	21.7	25.0	25.4	31.2	14.5	17.5	18.1	24.0	0.0	9.3	13.0
Department of Labor	11.0	38.4	30.2	13.1	13.7	13.8	13.6	14.2	14.3	0.0	0.0
Bureau of Labor Statistics	11.0	13.4	12.4	13.1	13.7	13.8	13.6	14.2	14.3	0.0	NA
Employment and Training Administration	0.0	25.0	17.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
Department of Transportation	16.2	23.0	36.3	24.5	19.9	0.0	1.6	2.5	0.0	0.0	4.6
Federal Highway Administration	16.2	23.0	17.4	24.5	19.9	0.0	1.6	2.5	0.0	0.0	4.6
Transportation Security Administration	na	na	18.9	na	na	na	na	na	na	na	na
Department of the Treasury	*	*	0.7	0.2	0.1	0.2	0.3	0.3	0.1	0.3	0.1
Bureau of Engraving and Printing	*	*	0.7	0.2	0.1	0.2	0.3	0.3	0.1	0.3	0.1
Department of Veterans Affairs	149.2	142.1	141.7	164.0	174.7	176.9	181.1	196.2	211.0	203.3	232.0
Other agencies											
Agency for International Development	0.1	0.1	0.1	0.1	0.1	18.4	18.0	1.5	2.9	0.6	0.8
Environmental Protection Agency	58.6	74.5	63.8	96.4	113.9	109.2	104.3	100.6	78.4	83.7	86.9
Library of Congress	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
National Aeronautics and Space Administration	2,305.4	1,765.2	1,984.7	1,907.8	2,143.5	2,239.6	1,803.2	1,313.0	874.5	1,021.6	809.3
National Science Foundation	2,540.0	2,862.6	3,074.5	3,391.0	3,505.1	3,410.7	3,504.0	3,618.4	3,715.5	5,623.9	4,667.2
Smithsonian Institution	98.0	98.0	106.0	104.0	108.0	109.0	119.0	145.0	142.0	152.0	167.0

* = amount greater than \$0 but less than \$50,000. na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 111

Federal obligations for basic research, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
All agencies	29,313.6	30,958.9	29,779.4	31,587.9	31,527.1	32,292.7	33,271.5	36,195.1	40,017.3	41,755.3
Departments										
Department of Agriculture	963.3	851.4	844.2	907.7	924.5	934.9	965.2	986.2	1,056.5	1,182.9
Agricultural Research Service	566.5	544.9	507.2	560.9	565.8	572.2	585.2	600.3	646.2	707.0
Animal and Plant Health Inspection Service	0.0	0.0	17.7	19.0	19.5	19.6	18.8	18.1	18.8	18.9
Economic Research Service	7.6	6.9	6.5	7.0	0.0	0.0	0.0	0.0	0.0	0.0
Foreign Agricultural Service	0.2	0.2	0.2	0.1	0.2	*	*	0.0	0.0	0.0
Forest Service	89.9	84.9	96.5	89.7	84.6	90.5	88.5	84.3	84.7	86.1
Grain Inspection, Packers, and Stockyards Administration	6.7	0.0	0.0	0.0	0.0	0.0	0.0	na	na	na
National Agricultural Statistics Service	3.3	3.5	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
National Institute of Food and Agriculture	289.1	211.0	212.7	231.0	254.5	252.4	272.6	283.5	306.9	371.0
Department of Commerce	165.5	174.2	190.6	214.5	232.4	247.3	246.0	227.3	253.2	261.9
Economic Development Administration	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA
National Institute of Standards and Technology	165.1	174.2	190.6	214.5	232.4	247.3	246.0	227.3	253.2	261.9
Department of Defense	1,885.4	2,035.8	1,862.8	2,073.5	2,133.4	2,238.7	2,110.1	2,389.9	2,510.2	2,564.7
Defense Advanced Research Projects Agency	254.2	345.0	284.7	347.3	359.8	378.1	391.2	458.4	478.3	481.6
Department of the Air Force	470.7	502.7	447.6	501.3	501.4	522.3	469.3	564.1	559.4	503.4
Department of the Army	415.0	418.1	397.9	435.8	448.9	461.8	450.4	471.9	494.7	550.9
Department of the Navy	547.0	587.8	555.6	610.9	620.4	636.9	569.2	596.1	655.7	637.1
Other defense agencies	198.4	182.1	177.2	178.2	202.9	239.8	230.0	299.3	322.1	391.8
Department of Education	7.5	6.8	24.4	25.0	22.4	23.2	32.7	54.6	57.3	58.7
Department of Energy	3,961.7	3,957.4	3,851.1	4,075.1	4,460.4	4,585.5	4,500.3	5,000.9	5,074.5	5,482.6
Bonneville Power Administration	4.0	4.6	9.0	4.8	4.3	4.3	5.5	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	6.4	6.3	3.6	4.2	6.5	2.7	6.0	12.6	14.6	15.4
Energy Efficiency and Renewable Energy	1.6	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fossil Energy	4.1	3.7	3.4	4.3	5.2	6.1	6.0	33.1	33.0	34.0
National Nuclear Security Administration	42.1	45.6	49.3	55.8	67.6	82.9	80.9	88.4	101.8	106.7
Defense Programs	0.0	0.0	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Defense Nuclear Nonproliferation	42.1	45.6	42.7	55.8	67.6	82.9	80.9	88.4	101.8	106.7
Nuclear Energy	0.0	0.0	0.0	0.0	42.6	34.6	0.0	0.0	0.0	0.0
Office of Cybersecurity, Energy Security, and Emergency Response	na	na	na	na	na	na	na	0.0	1.0	1.6
Office of Science	3,903.5	3,890.5	3,785.7	4,006.0	4,334.2	4,454.9	4,402.0	4,866.8	4,924.1	5,324.9
Department of Health and Human Services	16,066.3	15,977.4	15,288.3	16,005.2	15,076.9	15,645.3	16,700.1	18,240.9	19,099.8	20,477.3
Agency for Toxic Substances and Disease Registry	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0
Centers for Disease Control and Prevention	64.8	73.6	57.6	70.6	95.2	84.8	72.1	64.0	77.2	87.9
Health Resources and Services Administration	2.6	2.6	2.4	2.2	2.6	2.5	3.0	2.7	2.6	2.4

TABLE 111

Federal obligations for basic research, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
National Institutes of Health	15,998.9	15,901.2	15,228.4	15,932.4	14,979.0	15,558.0	16,625.0	18,173.0	19,020.0	20,387.0
Department of Homeland Security	113.8	84.3	0.0	41.6	11.7	13.1	11.6	60.6	46.3	45.3
Countering Weapons of Mass Destruction Office	NA	NA	NA	41.6	11.7	13.1	11.6	5.4	5.4	4.3
Science and Technology Directorate	113.8	84.3	0.0	0.0	0.0	0.0	0.0	55.2	40.9	41.0
Department of Housing and Urban Development	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.1	57.9
Department of the Interior	48.9	54.2	51.4	52.2	53.3	53.8	54.3	79.5	81.4	83.9
Bureau of Land Management	NA	NA	NA	NA	0.0	0.0	0.0	0.9	0.9	0.9
Bureau of Safety and Environmental Enforcement	na	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.2	0.2
National Park Service	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.9	0.9
U.S. Geological Survey	48.9	54.2	51.4	52.2	53.3	53.8	54.3	77.1	79.5	82.0
Department of Justice	17.5	15.3	20.7	8.1	5.3	12.9	2.1	16.2	21.2	21.7
Federal Bureau of Investigation	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Justice Programs	17.5	15.3	16.5	8.1	5.3	12.9	2.1	16.2	21.2	21.7
Department of Transportation	4.4	8.4	7.2	9.1	0.0	0.0	0.0	0.0	0.0	0.0
Federal Highway Administration	4.4	8.4	7.2	0.9	0.0	0.0	0.0	0.0	0.0	0.0
Federal Transit Administration	0.0	0.0	0.0	8.2	0.0	0.0	0.0	0.0	0.0	0.0
Department of the Treasury	0.2	0.1	0.1	0.2	0.2	1.9	0.0	11.1	10.3	5.6
Bureau of Engraving and Printing	0.2	0.1	0.1	0.2	0.2	1.9	0.0	11.1	10.3	5.5
U.S. Mint	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*	0.1
Department of Veterans Affairs	250.6	251.3	249.0	232.0	227.2	219.4	274.1	527.8	629.1	668.8
Other agencies										
Agency for International Development	0.0	0.0	9.0	0.7	0.0	0.0	0.8	0.0	0.0	0.0
Environmental Protection Agency	88.0	86.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Federal Communications Commission	0.0	0.0	0.0	0.0	0.0	0.0	*	0.0	0.0	0.0
National Aeronautics and Space Administration	856.8	2,606.0	2,824.2	3,022.9	3,209.7	3,280.8	3,425.8	3,281.7	5,689.0	5,259.6
National Science Foundation	4,690.6	4,652.4	4,361.5	4,725.2	4,973.9	4,829.3	4,739.1	5,089.2	5,212.1	5,342.2
Nuclear Regulatory Commission	0.0	0.0	0.0	0.0	0.0	0.1	1.4	1.4	0.8	0.8
Smithsonian Institution	193.1	197.0	195.0	194.9	195.7	206.2	207.9	227.9	236.4	241.4

* = amount greater than \$0 but less than \$50,000. na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 112

Federal obligations for applied research, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All agencies	18,900.8	22,755.6	24,338.4	26,320.4	27,237.1	26,597.9	26,951.1	27,227.8	26,739.7	30,812.5	31,932.6
Departments											
Department of Agriculture	803.5	900.6	880.3	907.6	998.9	1,049.2	1,084.7	1,130.2	1,136.1	1,145.3	1,158.8
Agricultural Marketing Service	4.3	4.1	4.4	4.1	7.9	7.7	6.3	6.4	2.5	2.1	2.2
Agricultural Research Service	327.3	358.0	381.5	382.3	450.2	454.2	465.3	468.2	460.3	456.5	471.3
Economic Research Service	57.7	59.1	60.3	61.6	63.7	66.6	67.5	83.4	73.4	70.9	84.5
Food Safety and Inspection Service	1.6	1.8	NA	NA	NA	NA	NA	NA	NA	NA	NA
Foreign Agricultural Service	0.6	0.6	0.6	0.7	1.2	1.1	0.6	0.4	0.3	0.3	0.3
Forest Service	100.4	106.7	113.9	131.4	133.2	133.2	138.2	191.9	173.0	192.2	184.3
Grain Inspection, Packers, and Stockyards Administration	0.7	0.0	0.0	0.0	0.0	6.7	7.1	0.0	0.0	0.0	0.0
National Agricultural Statistics Service	2.6	2.8	3.1	3.7	4.3	4.3	4.6	4.8	4.3	4.2	4.2
National Institute of Food and Agriculture	305.2	365.2	312.3	319.9	334.5	371.7	390.9	354.1	418.1	414.9	407.2
Rural Business-Cooperative Service	3.1	2.4	4.2	3.8	3.8	3.6	4.1	21.0	4.2	4.1	4.8
Department of Commerce	849.6	763.4	921.9	988.3	840.0	830.5	767.3	825.7	853.1	820.8	932.8
Economic Development Administration	0.6	0.6	0.4	0.5	0.2	0.5	0.2	0.8	1.3	1.3	1.3
National Institute of Standards and Technology	268.3	283.3	298.6	315.5	312.6	298.6	282.6	312.4	296.8	342.6	456.5
National Oceanic and Atmospheric Administration	574.1	470.8	615.7	665.6	519.9	520.3	471.8	500.1	542.7	463.8	458.0
National Telecommunications and Information Administration	4.0	4.2	4.1	6.4	6.3	6.9	6.7	7.0	7.0	6.9	7.6
U.S. Census Bureau	2.5	4.7	3.2	0.3	0.9	4.2	6.0	5.3	5.3	6.2	9.4
Department of Defense	3,690.2	4,796.9	4,452.8	4,419.5	4,281.7	4,532.0	4,447.7	4,866.8	4,964.4	5,061.7	5,212.0
Defense agencies and activities	1,482.2	1,633.4	1,754.2	1,699.2	1,685.5	1,594.6	1,580.2	1,630.8	1,719.5	1,863.9	2,028.8
Department of the Air Force	843.1	1,654.8	1,058.4	1,091.1	891.3	876.8	1,000.5	1,117.9	1,191.9	1,172.0	1,202.6
Department of the Army	765.6	879.7	886.9	877.0	1,028.8	1,303.4	1,103.8	1,336.7	1,239.0	1,235.8	1,260.8
Department of the Navy	599.3	629.0	753.3	752.2	676.1	757.3	763.3	781.4	814.0	789.9	719.7
Department of Education	161.5	180.9	178.3	196.1	201.9	204.4	213.0	207.4	199.5	198.4	218.0
Department of Energy	1,925.0	2,297.6	2,584.6	2,813.7	2,835.4	2,957.3	2,885.7	2,848.9	2,919.3	3,127.2	3,628.8
Advanced Research Projects Agency—Energy	na	na	na	na	na	na	na	na	0.0	0.0	205.1
Bonneville Power Administration	NA	NA	11.1	11.4	12.0	8.9	9.8	8.6	11.1	6.4	3.9
Civilian Radioactive Waste Management	NA	NA	62.5	75.8	78.9	53.5	52.9	10.5	1.4	0.1	0.0
Electricity Delivery and Energy Reliability	na	na	na	na	na	66.5	93.4	57.3	27.3	61.7	66.1
Energy Efficiency and Renewable Energy	na	NA	233.6	279.9	244.3	249.1	210.2	342.3	416.8	651.1	891.0
Environmental Management	NA	NA	49.0	20.8	12.8	14.9	10.2	2.4	2.3	10.9	30.8
Fossil Energy	NA	NA	136.9	245.9	221.6	206.7	210.8	211.0	179.0	241.8	213.3
National Nuclear Security Administration	NA	NA	2,046.1	2,147.7	2,193.6	2,274.5	2,210.9	2,145.8	2,151.3	2,039.3	1,917.7
Defense Programs	NA	NA	1,893.9	2,009.9	2,105.8	2,193.4	2,076.2	2,028.4	1,967.1	1,795.8	1,710.3
Office of Defense Nuclear Nonproliferation	NA	NA	152.1	137.8	87.8	81.0	134.7	117.4	184.2	243.5	207.4

TABLE 112

Federal obligations for applied research, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Nuclear Energy	NA	NA	42.5	29.4	69.4	83.2	87.5	71.0	130.1	116.0	300.9
Office of Science	NA	NA	3.0	2.8	2.9	0.0	0.0	0.0	0.0	0.0	0.0
Department of Health and Human Services	7,857.7	9,056.3	10,370.1	12,185.3	13,224.7	12,831.0	13,140.0	13,438.5	13,428.5	16,717.7	17,147.7
Administration for Children and Families	27.3	28.4	23.3	20.9	20.1	38.6	14.4	11.8	19.4	14.0	6.8
Administration for Community Living	2.8	3.7	3.7	0.0	3.0	2.9	2.9	0.0	0.0	0.0	0.0
Agency for Healthcare Research and Quality	186.7	248.1	274.8	284.0	279.4	293.2	293.2	293.4	307.6	347.8	789.3
Agency for Toxic Substances and Disease Registry	14.7	13.1	12.4	14.3	10.7	9.4	9.0	4.2	4.3	4.5	2.8
Centers for Disease Control and Prevention	505.0	544.0	521.0	564.0	539.8	510.8	544.6	388.6	389.0	280.7	324.3
Centers for Medicare and Medicaid Services	61.5	138.0	117.0	73.6	77.6	77.3	62.4	57.3	31.1	30.1	81.7
Food and Drug Administration	144.2	151.6	136.3	138.3	132.3	142.1	143.3	129.3	137.9	166.4	210.6
Health Resources and Services Administration	34.5	13.9	15.2	14.0	14.9	15.1	14.8	14.4	19.2	21.0	27.2
National Institutes of Health	6,864.2	7,890.5	9,266.3	11,056.4	12,125.9	11,716.7	12,028.6	12,515.1	12,498.4	15,833.3	15,650.7
Office of the Secretary of Health and Human Services	16.7	24.9	0.0	19.9	21.1	24.8	26.8	24.5	21.5	20.0	54.4
Office of the Assistant Secretary for Planning and Evaluation	16.7	24.9	0.0	19.9	21.1	24.8	26.8	24.5	21.5	20.0	54.4
Department of Homeland Security	na	na	na	NA	246.9	542.1	526.3	485.2	79.7	245.9	221.2
Science and Technology Directorate	na	na	na	NA	199.4	356.0	515.7	479.2	72.5	239.1	213.6
Transportation Security Administration	na	na	na	NA	41.5	180.5	2.6	0.0	0.0	0.0	NA
U.S. Coast Guard	na	na	na	NA	5.1	4.6	7.1	5.2	6.6	6.7	7.6
U.S. Secret Service	na	na	na	NA	1.0	1.0	1.0	0.8	0.6	NA	NA
Department of Housing and Urban Development	15.5	17.9	16.2	14.0	17.5	16.5	11.5	14.0	10.4	11.7	38.8
Department of the Interior	496.6	511.0	511.6	492.7	509.9	495.6	509.0	511.8	522.9	610.5	594.1
Bureau of Ocean Energy Management, Regulation and Enforcement	29.2	24.5	31.2	26.7	27.2	27.1	28.9	25.0	32.4	35.7	43.4
Bureau of Reclamation	7.4	7.3	3.6	3.3	3.8	4.4	3.1	3.0	3.1	3.0	7.3
National Park Service	34.2	8.3	12.6	6.5	11.5	3.2	3.7	7.0	6.6	11.3	6.4
U.S. Geological Survey	425.8	470.9	464.1	456.2	467.4	460.9	473.4	476.8	480.8	560.5	537.0
Department of Justice	27.8	36.8	23.8	25.4	32.6	40.2	34.9	38.5	77.5	71.5	74.4
Bureau of Prisons	3.4	8.5	3.6	4.8	5.0	4.4	2.7	4.2	3.0	2.8	2.8
Office of Justice Programs	24.4	28.3	20.1	20.6	27.6	35.8	32.1	34.3	74.5	68.8	71.6
Department of Labor	35.1	18.7	15.3	23.2	23.8	22.2	16.5	33.8	26.6	29.2	11.9
Bureau of Labor Statistics	1.3	8.1	8.3	7.5	8.7	8.7	9.2	9.5	9.9	0.0	NA
Employee Benefits Security Administration	2.7	3.3	2.7	2.7	2.5	2.7	2.6	1.8	2.2	2.2	5.8
Employment and Training Administration	25.0	0.0	0.0	9.0	9.0	6.7	0.7	18.8	10.7	22.4	NA
Occupational Safety and Health Administration	5.8	5.7	3.8	3.1	3.4	3.4	3.5	3.4	3.6	4.5	5.9
Office of the Secretary of Labor	0.3	1.5	0.3	0.8	0.1	0.5	0.3	0.3	0.0	0.0	0.0
Pension Benefit Guaranty Corp.	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Department of State	1.5	2.2	2.3	2.3	3.0	3.3	4.2	3.8	3.7	3.7	2.9

TABLE 112

Federal obligations for applied research, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Department of Transportation	328.2	422.7	494.6	408.4	340.3	254.6	533.6	587.0	634.1	586.7	641.2
Federal Aviation Administration	164.4	186.1	244.8	135.6	118.3	128.3	136.6	128.2	140.4	162.9	236.6
Federal Highway Administration	76.7	135.3	121.1	168.3	181.9	51.7	286.8	345.8	347.3	316.8	291.2
Federal Motor Carrier Safety Administration	2.8	8.0	0.2	6.8	6.4	6.6	5.3	9.4	8.4	6.9	6.6
Federal Railroad Administration	24.2	23.8	29.7	28.7	24.3	25.7	40.8	31.5	37.5	8.3	9.7
Federal Transit Administration	0.0	0.0	0.6	0.0	*	0.3	3.6	2.8	3.6	4.2	20.0
National Highway Traffic Safety Administration	50.6	58.3	59.6	65.4	6.7	40.1	57.5	64.1	83.3	82.0	70.8
Pipeline and Hazardous Materials Safety Administration	na	na	na	na	2.6	1.8	2.2	3.6	2.8	2.1	2.1
Research and Innovative Technology Administration	na	na	na	na	0.0	0.1	0.7	1.7	10.7	3.7	4.2
Research and Special Programs Administration	4.5	5.2	3.7	3.5	na	na	na	na	na	na	na
Transportation Security Administration	na	na	28.3	na	na	na	na	na	na	na	na
U.S. Coast Guard	5.0	5.9	6.4	na	na	na	na	na	na	na	na
Department of the Treasury	51.2	63.2	61.1	58.5	61.2	63.1	60.4	58.9	64.4	66.8	68.3
Bureau of Engraving and Printing	2.6	4.7	4.6	4.1	3.9	5.4	5.1	4.1	4.8	1.8	0.9
Internal Revenue Service	47.4	56.6	55.5	54.4	57.3	57.8	55.4	54.8	59.6	64.9	66.3
Office of Thrift Supervision	0.1	0.1	0.1	0.0	NA	NA	NA	NA	NA	NA	NA
U.S. Customs Service	0.0	1.0	*	na	na	na	na	na	na	na	na
U.S. Mint	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
U.S. Secret Service	1.0	0.7	0.8	na	na	na	na	na	na	na	na
Department of Veterans Affairs	185.4	196.1	172.6	185.6	209.2	205.8	210.8	228.4	245.6	274.0	297.0
Other agencies											
Agency for International Development	189.2	239.1	247.5	262.3	241.3	198.3	197.0	232.9	121.0	159.6	83.5
Appalachian Regional Commission	0.6	0.7	0.7	0.7	0.6	0.8	1.0	0.8	0.8	1.0	0.6
Consumer Product Safety Commission	0.0	0.1	0.0	0.0	NA	NA	NA	NA	NA	NA	NA
Environmental Protection Agency	352.1	276.2	259.9	365.4	422.9	416.2	400.5	391.5	371.8	384.4	397.9
Federal Communications Commission	2.8	2.7	4.4	4.5	4.1	5.1	7.1	6.4	6.7	6.9	3.7
Federal Trade Commission	0.7	0.7	1.8	2.3	1.6	1.2	1.6	1.5	2.6	2.4	3.0
Library of Congress	0.6	2.0	1.7	0.5	14.4	1.6	3.3	0.5	0.5	0.5	0.7
National Aeronautics and Space Administration	1,658.5	2,706.6	2,853.8	2,645.7	2,355.9	1,489.4	1,468.6	818.8	531.2	681.8	693.6
National Archives and Records Administration	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	4.6	4.6	4.6
National Science Foundation	185.5	180.9	185.5	217.6	265.6	332.2	286.6	351.7	419.7	471.3	348.5
Nuclear Regulatory Commission	53.0	53.0	74.3	64.0	72.1	70.1	71.4	76.5	61.0	61.2	85.4
Social Security Administration	28.8	28.9	22.8	36.8	30.4	35.1	67.8	68.2	54.1	67.9	63.0
U.S. Agency for Global Media	0.1	*	0.3	0.0	1.0	0.2	0.2	NA	NA	NA	NA

* = amount greater than \$0 but less than \$50,000. na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):
Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):
National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 113

Federal obligations for applied research, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
All agencies	28,751.2	31,027.4	29,753.2	31,603.5	32,298.4	34,812.0	36,599.8	38,392.4	41,100.5	43,507.2
Departments										
Department of Agriculture	1,162.0	1,112.6	1,023.7	1,152.1	1,203.9	1,221.0	1,251.1	1,270.4	1,350.4	1,506.4
Agricultural Marketing Service	2.1	2.1	2.5	2.9	3.4	3.3	3.6	3.6	3.9	3.5
Agricultural Research Service	453.2	435.9	405.7	448.7	452.6	457.8	468.1	480.2	516.9	565.6
Economic Research Service	73.5	70.2	64.5	70.6	85.1	85.1	86.4	86.5	85.6	85.3
Foreign Agricultural Service	0.4	0.5	0.5	0.2	0.4	0.2	0.2	0.0	0.0	0.5
Forest Service	192.0	187.2	204.7	186.8	175.6	190.9	182.1	169.2	170.3	173.2
Grain Inspection, Packers, and Stockyards Administration	0.0	5.0	4.7	5.7	6.0	6.0	0.2	na	na	na
National Agricultural Statistics Service	4.1	3.9	4.1	5.4	5.4	5.4	5.4	5.3	5.3	5.4
National Institute of Food and Agriculture	435.0	403.2	333.5	426.0	471.7	468.8	501.8	521.4	564.5	669.0
Rural Business-Cooperative Service	1.7	4.5	3.6	5.8	3.5	3.6	3.3	4.2	3.9	3.9
Department of Commerce	775.4	814.3	832.6	1,062.8	921.5	905.6	1,056.3	1,001.5	1,028.8	1,108.5
Economic Development Administration	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA
National Institute of Standards and Technology	307.9	333.3	335.4	384.9	398.8	377.5	444.6	448.6	449.8	486.0
National Oceanic and Atmospheric Administration	448.8	396.1	374.9	441.8	470.0	427.7	547.4	488.2	541.8	575.8
National Telecommunications and Information Administration	7.8	7.6	7.3	9.6	12.3	10.6	8.2	9.0	7.9	8.2
U.S. Census Bureau	10.8	77.3	115.0	226.5	40.5	89.8	56.1	55.8	29.2	38.5
Department of Defense	4,710.3	4,626.7	4,092.5	4,630.8	4,558.1	4,913.3	5,068.0	5,262.8	5,758.2	5,900.2
Defense Advanced Research Projects Agency	1,129.8	1,151.3	983.3	1,189.2	1,125.2	1,157.9	1,118.1	1,221.6	1,265.0	1,513.2
Department of the Air Force	1,203.2	1,223.2	1,054.7	1,072.2	1,107.8	1,240.2	1,244.0	1,340.7	1,547.5	1,661.3
Department of the Army	1,063.4	915.0	859.0	982.6	941.6	1,060.4	1,233.2	1,217.2	1,461.5	1,262.0
Department of the Navy	748.4	826.1	740.1	871.9	844.7	923.6	970.6	953.3	935.0	909.7
Other defense agencies	565.5	511.1	455.4	515.0	538.9	531.2	502.1	530.1	549.2	554.0
Department of Education	205.5	201.6	177.8	183.4	137.4	140.1	141.4	135.3	131.4	132.6
Department of Energy	3,388.4	3,403.9	3,482.3	4,016.6	4,181.1	4,879.7	5,084.2	5,507.4	6,295.2	7,199.1
Advanced Research Projects Agency—Energy	127.8	56.4	92.0	150.0	138.9	172.1	150.6	80.0	202.5	212.5
Bonneville Power Administration	1.3	0.7	3.5	2.5	2.5	2.5	3.7	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	55.3	57.7	49.8	61.0	56.6	66.6	74.4	81.5	72.3	67.9
Energy Efficiency and Renewable Energy	465.9	434.5	529.8	540.1	472.6	576.4	853.0	1,284.9	1,270.3	1,546.4
Environmental Management	22.3	14.7	3.0	16.2	8.3	9.8	10.4	12.5	8.6	3.8
Fossil Energy	180.7	161.4	150.6	157.5	193.6	225.2	223.7	628.6	626.0	646.0
National Nuclear Security Administration	2,208.3	2,293.2	2,355.0	2,714.3	2,637.2	3,126.6	2,997.2	2,556.3	3,568.3	4,264.1
Defense Programs	1,974.7	2,143.4	2,141.6	2,519.4	2,526.7	3,010.1	2,880.9	2,421.7	3,434.1	4,131.0
Office of Defense Nuclear Nonproliferation	233.6	149.8	213.4	194.9	110.5	116.5	116.3	134.7	134.2	133.1
Nuclear Energy	326.8	336.4	236.1	295.9	596.7	630.9	688.5	762.7	378.3	435.4

TABLE 113

Federal obligations for applied research, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
Office of Cybersecurity, Energy Security, and Emergency Response	na	na	na	na	na	na	na	0.0	39.0	23.0
Office of Science	0.0	49.1	62.5	79.1	74.7	69.5	82.7	100.9	129.8	0.0
Department of Health and Human Services	14,704.4	15,146.8	14,026.3	14,582.0	15,119.9	16,483.3	16,977.3	18,560.6	19,254.6	20,265.7
Administration for Children and Families	9.6	8.4	2.4	3.2	2.2	3.1	2.4	3.0	2.3	1.6
Administration for Community Living	0.0	0.0	0.0	0.0	72.5	66.1	66.3	65.6	65.9	71.8
Agency for Healthcare Research and Quality	341.0	336.5	335.8	335.0	335.0	306.2	300.1	306.1	308.1	308.1
Agency for Toxic Substances and Disease Registry	5.1	1.4	1.1	1.4	1.8	2.2	2.8	1.6	7.0	7.0
Centers for Disease Control and Prevention	282.8	407.4	276.8	308.6	365.1	408.8	363.9	322.3	288.7	264.0
Centers for Medicare and Medicaid Services	35.4	21.0	20.0	33.6	24.0	29.5	28.9	230.7	133.5	136.0
Food and Drug Administration	225.2	352.6	360.6	389.1	375.7	485.9	375.0	477.6	493.1	495.0
Health Resources and Services Administration	24.1	24.2	24.1	25.5	24.6	23.5	26.8	33.6	30.0	29.2
National Institutes of Health	13,761.3	13,975.6	12,986.9	13,467.2	13,901.0	15,140.0	15,794.0	17,103.0	17,909.0	18,936.0
Office of the Secretary of Health and Human Services	19.9	19.5	18.6	18.6	18.0	18.0	16.9	17.1	17.0	17.0
Office of the Assistant Secretary for Planning and Evaluation	19.9	19.5	18.6	18.6	18.0	18.0	16.9	17.1	17.0	17.0
Department of Homeland Security	134.3	222.3	140.7	214.5	205.1	194.5	264.4	308.7	233.2	187.7
Countering Weapons of Mass Destruction Office	NA	NA	NA	37.7	25.6	24.6	22.7	8.8	25.8	19.7
Cybersecurity and Infrastructure Security Agency	na	na	na	na	na	na	na	7.2	13.1	14.4
Science and Technology Directorate	127.3	210.1	133.7	168.4	173.1	162.8	235.3	286.3	188.4	152.0
U.S. Coast Guard	7.1	12.2	7.0	8.4	6.4	7.0	6.5	6.5	5.9	1.5
Department of Housing and Urban Development	48.8	63.1	44.1	36.5	38.2	42.9	41.2	40.3	21.9	30.7
Department of the Interior	580.6	570.3	551.9	597.1	627.0	672.1	667.5	570.0	608.3	634.0
Bureau of Indian Affairs	NA	NA	NA	NA	NA	NA	NA	5.0	5.0	5.0
Bureau of Land Management	NA	NA	NA	NA	15.4	17.0	17.0	12.9	12.9	12.9
Bureau of Ocean Energy Management	na	39.0	39.5	48.0	43.9	60.1	63.4	65.6	65.1	67.2
Bureau of Ocean Energy Management, Regulation and Enforcement	45.4	na	na	na	na	na	na	na	na	na
Bureau of Reclamation	8.6	7.5	7.5	9.0	7.3	18.6	22.8	16.8	16.5	17.5
Bureau of Safety and Environmental Enforcement	na	7.7	15.2	32.6	16.6	23.6	8.3	4.0	7.4	13.3
National Park Service	8.3	5.4	6.4	14.1	7.5	8.0	8.7	9.1	9.3	9.4
Office of Surface Mining Reclamation and Enforcement	NA	NA	NA	NA	NA	NA	NA	0.0	0.3	0.5
U.S. Fish and Wildlife Service	NA	NA	NA	NA	29.8	32.5	32.8	32.7	32.7	32.7
U.S. Geological Survey	518.3	510.7	483.2	493.4	506.4	512.4	514.6	424.1	459.2	475.5
Department of Justice	66.9	60.1	57.1	134.1	123.0	144.0	84.6	75.0	84.2	68.9
Bureau of Prisons	3.5	1.7	2.5	2.2	2.5	2.5	1.9	1.3	1.2	1.3
Federal Bureau of Investigation	8.1	6.9	2.4	0.0	0.0	0.0	0.0	2.9	1.0	1.0
Office of Justice Programs	55.4	51.5	52.2	131.9	120.5	141.4	82.7	70.8	81.9	66.6
Department of Labor	53.0	18.9	13.9	11.2	10.2	5.6	4.6	4.8	4.4	4.7

Federal obligations for applied research, by agency: FYs 2011–20

[illegible][illegible]

TABLE 113
Federal obligations for applied research, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
U.S. Postal Service	NA	NA	NA	NA	28.0	29.4	73.3	53.2	26.7	26.6

* = amount greater than \$0 but less than \$50,000. na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):
Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):
National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 114

Federal obligations for development, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All agencies	37,439.7	39,778.8	45,701.9	52,455.8	58,716.6	65,110.2	68,194.3	73,169.3	73,212.4	77,398.2	76,626.5
Departments											
Department of Agriculture	135.4	155.3	161.3	170.5	183.4	181.5	183.1	180.8	182.5	191.7	223.2
Agricultural Marketing Service	0.8	0.7	0.8	0.7	1.0	0.2	0.0	0.0	2.5	2.1	2.2
Agricultural Research Service	79.6	89.5	95.4	95.6	109.8	110.8	113.5	114.2	112.3	114.1	117.8
Animal and Plant Health Inspection Service	20.6	25.4	23.7	28.0	24.4	24.4	25.5	26.0	28.4	28.9	30.1
Food Safety and Inspection Service	0.3	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA
Forest Service	31.2	33.2	35.4	40.9	41.4	46.2	44.1	40.5	39.3	46.6	73.1
Grain Inspection, Packers, and Stockyards Administration	2.9	6.1	6.0	5.3	6.7	0.0	0.0	0.0	0.0	0.0	0.0
Department of Commerce	140.7	169.6	156.9	153.8	171.0	143.9	101.5	99.2	80.8	187.8	139.4
National Institute of Standards and Technology	95.6	85.2	96.7	95.0	84.5	61.2	30.3	41.2	23.2	21.2	34.1
National Oceanic and Atmospheric Administration	18.7	22.1	22.0	19.8	46.3	63.5	55.1	40.7	38.1	143.7	67.4
National Telecommunications and Information Administration	17.7	46.2	15.5	17.1	17.8	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Census Bureau	8.7	16.1	22.7	21.9	22.4	19.3	16.1	17.3	19.4	22.9	37.8
Department of Defense	31,293.7	33,175.8	39,147.4	46,081.9	52,095.0	57,456.8	60,118.7	65,817.3	65,252.4	69,064.6	66,405.6
Defense agencies and activities	5,291.5	6,871.8	9,422.2	10,291.3	11,189.0	13,572.5	12,563.0	14,037.1	13,874.8	14,034.0	13,820.9
Department of the Air Force	13,005.5	12,361.1	13,382.6	16,929.6	19,108.5	18,724.6	20,336.8	23,723.9	23,640.4	26,346.2	24,843.2
Department of the Army	4,352.8	5,135.7	5,965.1	6,492.0	7,751.9	8,508.1	9,865.7	9,907.3	10,246.7	10,241.5	9,178.1
Department of the Navy	8,354.0	8,576.6	10,144.1	12,133.4	13,747.5	16,344.0	17,174.3	17,967.2	17,305.8	18,256.7	18,366.5
Operational Test and Evaluation, Director	32.9	205.3	233.5	235.7	298.2	307.5	178.9	181.9	184.7	186.2	196.9
Test and Evaluation, Deputy Under Secretary of Defense	257.0	25.3	na	na	na	na	na	na	na	na	na
Department of Education	83.8	94.4	102.1	101.2	100.6	102.0	121.4	121.6	124.0	119.7	137.7
Department of Energy	1,962.2	2,074.9	1,981.7	2,151.3	2,055.7	2,029.7	1,841.7	2,020.9	2,139.1	2,701.8	3,087.2
Advanced Research Projects Agency—Energy	na	na	na	na	na	na	na	na	0.0	0.0	172.7
Bonneville Power Administration	NA	NA	8.7	8.7	9.3	2.3	1.0	2.5	2.6	0.7	1.3
Electricity Delivery and Energy Reliability	na	na	na	na	na	13.9	40.1	35.2	55.4	25.5	39.9
Energy Efficiency and Renewable Energy	na	NA	446.2	371.8	317.0	285.5	219.3	318.7	300.1	930.3	983.4
Environmental Management	NA	NA	73.5	48.6	30.0	34.8	23.8	16.3	17.1	19.3	59.0
Fossil Energy	NA	NA	218.3	383.5	294.9	350.4	217.5	201.7	221.0	239.7	266.6
National Nuclear Security Administration	NA	NA	1,229.8	1,317.0	1,399.8	1,341.4	1,338.6	1,436.5	1,540.1	1,486.2	1,497.1
Defense Programs	NA	NA	478.7	566.8	621.5	539.4	517.4	627.5	740.3	680.3	537.2
Fissile Materials Disposition	NA	NA	27.4	25.1	1.0	0.0	0.0	0.0	NA	NA	NA
Naval Nuclear Propulsion Program	NA	NA	637.0	650.0	708.6	740.5	720.4	730.3	711.8	756.4	914.3
Office of Defense Nuclear Nonproliferation	NA	NA	86.8	75.1	68.7	61.5	100.8	78.8	88.0	49.5	45.6
Nuclear Energy	NA	NA	0.0	17.7	4.8	1.3	1.5	9.9	3.0	0.0	67.2
Office of Intelligence	NA	NA	5.3	4.0	0.0	NA	NA	NA	NA	NA	NA

TABLE 114

Federal obligations for development, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Office of Science	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*	0.0
Department of Health and Human Services	512.8	693.3	780.7	111.3	142.0	128.5	86.0	90.8	94.5	94.1	137.0
Agency for Healthcare Research and Quality	11.9	21.6	23.9	24.7	24.3	25.5	25.5	25.5	26.7	30.2	63.1
Agency for Toxic Substances and Disease Registry	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Centers for Disease Control and Prevention	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.1	27.3	30.9	37.2
Health Resources and Services Administration	0.0	34.9	36.8	26.7	30.5	35.2	6.2	6.4	40.4	32.9	36.7
Office of the Secretary of Health and Human Services	3.1	2.5	2.5	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Office of Public Health and Science	3.1	2.5	2.5	2.6	NA	NA	NA	NA	NA	NA	NA
Substance Abuse and Mental Health Services Administration	497.8	634.3	717.6	57.2	87.2	67.6	54.3	41.8	0.0	0.0	NA
Department of Homeland Security	na	na	na	NA	532.6	765.0	1,119.2	321.0	511.8	325.3	352.6
Science and Technology Directorate	na	na	na	NA	507.7	756.2	1,096.0	305.2	498.7	311.9	335.5
Transportation Security Administration	na	na	na	NA	15.0	0.0	9.1	3.8	0.0	0.0	NA
U.S. Coast Guard	na	na	na	NA	9.9	8.8	14.2	12.1	13.0	13.4	17.1
Department of Housing and Urban Development	30.1	34.9	29.1	25.1	29.2	27.0	22.0	26.5	19.2	21.5	22.9
Department of the Interior	31.4	46.9	75.4	63.3	58.1	58.3	52.0	61.4	70.1	74.8	77.7
Bureau of Reclamation	2.5	2.4	6.8	6.1	7.1	8.3	5.7	5.5	5.8	5.5	2.4
National Park Service	0.0	2.9	8.6	3.9	2.8	0.4	0.2	0.7	1.9	2.8	1.1
U.S. Geological Survey	29.0	41.5	60.1	53.3	48.2	49.6	46.0	55.2	62.4	66.4	74.2
Department of Justice	30.9	41.6	50.0	91.6	58.2	69.9	75.0	113.7	35.9	22.5	37.9
Bureau of Prisons	4.3	5.6	5.1	5.0	5.8	8.4	9.4	8.5	7.5	7.7	7.9
Federal Bureau of Investigation	10.0	19.0	33.6	42.8	34.0	33.5	34.3	70.8	26.1	14.5	30.0
Immigration and Naturalization Service	0.6	0.9	0.0	na	na	na	na	na	na	na	na
Office of Justice Programs	16.1	16.0	11.4	43.8	18.5	28.0	31.2	34.4	2.3	0.3	0.0
Department of Labor	37.5	40.3	120.9	152.8	161.9	128.4	65.1	1.6	1.5	2.2	2.4
Employment and Training Administration	35.9	35.9	119.3	151.0	161.0	127.0	63.5	0.0	0.0	0.0	NA
Office of the Secretary of Labor	1.0	3.8	0.9	1.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Pension Benefit Guaranty Corp.	0.7	0.6	0.7	0.8	0.9	1.3	1.6	1.6	1.5	2.2	2.4
Department of Transportation	123.0	228.7	284.6	260.4	269.1	163.8	284.0	201.7	172.0	239.2	262.2
Federal Aviation Administration	54.6	100.8	100.3	109.4	99.5	98.2	123.4	113.7	116.7	134.8	153.8
Federal Highway Administration	33.9	82.5	119.8	112.4	121.5	22.2	111.7	56.4	29.9	31.0	41.0
Federal Motor Carrier Safety Administration	1.1	3.4	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Federal Railroad Administration	3.1	0.3	3.5	3.4	4.3	5.0	6.4	6.2	0.0	31.5	31.4
Federal Transit Administration	8.9	8.0	5.2	7.1	4.6	3.9	13.0	3.2	5.8	6.3	2.6
Office of the Secretary of Transportation	4.0	13.0	18.4	21.0	31.8	21.0	14.8	6.5	13.5	20.5	23.5
Pipeline and Hazardous Materials Safety Administration	na	na	na	na	7.4	12.1	13.0	14.7	6.1	7.7	7.8
Research and Innovative Technology Administration	na	na	na	na	0.0	1.4	1.7	1.0	0.0	7.5	1.9

TABLE 114

Federal obligations for development, by agency: FYs 2000–10

(Dollars in millions)

Agency	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Research and Special Programs Administration	2.3	3.1	6.4	7.1	na	na	na	na	na	na	na
Transportation Security Administration	na	na	11.8	na	na	na	na	na	na	na	na
U.S. Coast Guard	15.0	17.7	15.6	na	na	na	na	na	na	na	na
Department of the Treasury	10.3	4.5	12.6	1.3	1.2	3.0	4.4	4.4	1.0	1.6	0.2
Bureau of Engraving and Printing	0.2	*	1.8	0.6	0.2	0.6	0.7	0.9	0.4	0.8	0.2
Internal Revenue Service	7.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Customs Service	1.8	3.0	10.6	na	na	na	na	na	na	na	na
U.S. Mint	1.3	0.8	0.3	0.7	1.0	2.4	3.7	3.5	0.6	0.8	0.0
Department of Veterans Affairs	7.0	6.8	14.5	15.8	21.3	19.3	19.7	21.4	23.0	32.7	34.0
Other agencies											
Agency for International Development	29.5	27.8	22.2	23.6	23.4	40.8	40.0	0.0	0.0	0.0	0.0
Environmental Protection Agency	91.5	99.8	91.5	105.3	125.1	116.0	116.7	83.8	81.8	84.7	87.5
Federal Communications Commission	0.0	0.0	0.0	0.0	4.4	3.7	0.4	2.1	0.0	0.1	0.0
Library of Congress	1.9	1.1	1.3	1.2	1.6	7.0	4.0	6.7	0.9	0.3	0.7
National Aeronautics and Space Administration	2,917.9	2,883.1	2,669.7	2,945.5	2,683.1	3,665.7	3,939.2	3,994.4	4,421.8	4,233.5	5,618.4
National Science Foundation	0.0	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50,000. na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 115

Federal obligations for development, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
All agencies	77,467.8	76,538.3	66,187.8	67,369.9	64,927.8	48,728.1	49,103.5	54,837.2	61,306.4	65,622.2
Departments										
Department of Agriculture	216.0	207.2	151.2	198.5	212.7	201.9	202.1	222.0	230.1	214.9
Agricultural Marketing Service	2.1	2.1	2.5	2.9	3.4	3.3	3.6	3.6	3.9	3.5
Agricultural Research Service	113.3	109.0	101.4	112.2	113.2	114.4	117.0	120.1	129.2	141.4
Animal and Plant Health Inspection Service	29.0	37.4	19.1	20.6	20.7	20.7	20.7	20.7	20.7	20.7
Forest Service	71.6	58.6	28.1	58.8	71.6	59.6	56.9	73.5	72.2	45.8
National Agricultural Statistics Service	0.0	0.0	0.0	4.0	3.8	3.9	4.0	4.2	4.2	3.6
Department of Commerce	126.2	66.3	69.0	97.8	177.4	198.0	310.2	209.9	252.8	251.4
National Institute of Standards and Technology	34.0	5.2	9.1	2.8	2.7	4.6	25.1	10.2	9.4	20.5
National Oceanic and Atmospheric Administration	43.5	36.7	43.7	62.7	73.6	83.6	120.8	145.6	177.0	149.6
U.S. Census Bureau	48.7	24.4	16.2	32.3	101.1	109.8	164.2	54.1	66.4	81.3
Department of Defense	68,562.2	67,141.6	57,602.4	58,276.1	54,822.1	37,596.6	37,694.6	45,320.5	50,511.1	53,996.4
Defense Advanced Research Projects Agency	1,462.3	1,253.4	1,103.9	1,286.0	1,330.7	1,397.5	1,385.2	1,338.2	1,577.7	1,672.4
Department of the Air Force	24,826.1	25,819.2	22,021.9	22,636.9	20,710.9	5,559.1	6,386.2	9,297.9	12,969.9	13,457.0
Department of the Army	8,353.3	7,886.7	6,626.4	5,913.8	5,373.8	4,850.0	5,847.2	6,892.2	8,318.6	8,941.9
Department of the Navy	16,497.1	16,314.4	14,123.8	14,084.2	14,024.6	15,083.9	13,696.2	13,896.8	13,750.5	15,240.2
Operational Test and Evaluation, Director	na	na	na	na	na	na	na	na	na	na
Other defense agencies	17,423.3	15,867.9	13,726.5	14,355.2	13,382.1	10,706.1	10,379.8	13,895.5	13,894.4	14,684.8
Department of Education	133.1	129.7	107.7	113.6	91.6	81.1	87.8	76.3	47.2	50.9
Department of Energy	2,595.7	2,590.7	2,507.6	2,434.2	2,749.5	2,743.3	2,723.9	2,324.1	3,006.7	3,454.3
Advanced Research Projects Agency—Energy	47.1	46.4	90.2	110.9	102.7	127.2	123.2	80.0	202.5	212.5
Bonneville Power Administration	7.9	9.2	1.9	8.7	8.8	8.8	4.8	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	27.0	37.3	29.5	38.4	34.1	43.1	52.6	51.7	50.8	70.6
Energy Efficiency and Renewable Energy	395.7	544.9	388.2	326.3	606.6	711.2	588.0	401.4	425.5	1,020.3
Environmental Management	45.2	31.2	6.1	11.4	16.8	19.9	21.1	25.4	17.5	7.8
Fossil Energy	225.8	201.7	188.3	263.9	325.2	377.4	374.8	0.0	0.0	0.0
National Nuclear Security Administration	1,785.9	1,695.2	1,776.1	1,646.6	1,566.5	1,358.4	1,356.6	1,412.7	2,070.5	1,948.8
Defense Programs	796.3	619.0	744.7	506.5	448.6	97.0	84.7	150.4	226.3	236.7
Naval Nuclear Propulsion Program	941.7	1,040.1	994.0	1,093.7	1,083.4	1,215.7	1,220.0	1,205.8	1,788.6	1,648.4
Office of Defense Nuclear Nonproliferation	47.9	36.1	37.4	46.4	34.5	45.8	51.8	56.4	55.5	63.7
Nuclear Energy	61.0	24.8	27.4	28.0	88.8	97.3	202.8	352.9	228.1	175.1
Office of Cybersecurity, Energy Security, and Emergency Response	na	na	na	na	na	na	na	0.0	11.9	19.3
Department of Health and Human Services	78.0	71.4	67.9	68.8	75.4	87.1	96.8	109.8	836.8	818.7

TABLE 115

Federal obligations for development, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
Administration for Community Living	0.0	0.0	0.0	0.0	3.6	17.0	17.0	17.1	17.2	18.4
Agency for Healthcare Research and Quality	29.7	29.3	29.2	29.0	29.0	27.8	23.9	27.9	29.9	0.0
Biomedical Advanced Research and Development Authority	NA	NA	NA	NA	NA	NA	NA	NA	736.2	747.0
Centers for Disease Control and Prevention	38.3	31.4	28.6	29.7	29.0	27.6	39.4	64.9	53.6	53.3
Health Resources and Services Administration	10.1	10.7	10.1	10.1	13.8	14.7	16.6	0.0	0.0	0.0
Department of Homeland Security	311.0	295.2	250.2	326.6	525.4	364.6	580.6	542.5	367.6	274.8
Countering Weapons of Mass Destruction Office	NA	NA	NA	5.1	34.0	25.3	35.0	15.7	50.2	17.3
Science and Technology Directorate	296.8	268.3	235.4	303.8	478.2	322.8	530.5	490.5	281.2	229.0
Transportation Security Administration	NA	NA	NA	NA	NA	NA	NA	20.2	20.6	22.9
U.S. Coast Guard	14.2	26.9	14.8	17.7	13.2	16.4	15.1	15.1	13.7	3.5
U.S. Secret Service	NA	NA	NA	NA	NA	NA	NA	1.0	1.9	2.1
Department of Housing and Urban Development	24.1	26.4	23.3	17.8	20.3	23.9	22.7	21.6	0.0	0.0
Department of the Interior	76.5	113.3	106.0	108.3	119.7	130.6	140.7	116.0	137.1	164.8
Bureau of Land Management	NA	NA	NA	NA	1.0	1.0	1.0	7.0	7.0	7.0
Bureau of Ocean Energy Management	na	0.0	0.0	0.0	6.4	12.1	12.4	12.7	20.4	29.7
Bureau of Reclamation	2.9	2.5	2.5	3.0	2.4	2.3	4.7	4.7	6.7	18.9
Bureau of Safety and Environmental Enforcement	na	2.6	1.2	0.3	3.0	3.7	3.1	0.3	1.5	1.9
National Park Service	0.9	0.2	0.5	1.1	0.7	0.7	0.8	0.0	0.0	0.0
U.S. Geological Survey	72.8	108.0	101.8	103.9	106.1	110.7	118.8	91.4	101.4	107.3
Department of Justice	17.8	9.6	41.0	18.3	21.3	51.1	40.2	15.4	15.8	16.5
Bureau of Prisons	8.2	8.8	8.6	8.6	8.4	8.4	7.7	4.4	5.3	5.8
Federal Bureau of Investigation	9.7	0.8	32.4	9.6	12.9	13.0	2.2	0.0	0.0	0.0
Office of Justice Programs	0.0	0.0	0.0	0.1	0.0	29.7	30.3	11.0	10.5	10.7
Department of Labor	2.6	2.5	2.4	2.9	3.9	3.9	0.0	0.0	0.0	0.0
Pension Benefit Guaranty Corp.	2.6	2.5	2.4	2.9	3.9	3.9	0.0	0.0	NA	NA
Department of Transportation	204.4	200.0	200.3	175.2	192.9	311.8	253.0	295.1	266.9	421.9
Federal Aviation Administration	119.5	112.9	95.0	82.9	106.1	195.8	186.2	180.5	193.9	343.9
Federal Highway Administration	44.3	54.5	70.1	58.8	39.8	85.0	46.3	71.0	36.7	25.8
Federal Motor Carrier Safety Administration	0.6	0.4	0.5	0.4	0.0	0.9	0.5	0.5	0.0	0.0
Federal Railroad Administration	24.0	12.1	11.0	10.2	11.2	10.8	10.2	14.1	7.5	6.0
Federal Transit Administration	0.6	0.8	2.8	0.0	9.2	0.0	0.0	0.0	0.0	0.0

TABLE 115

Federal obligations for development, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
Office of the Secretary of Transportation	9.3	8.9	10.9	11.1	9.5	14.2	8.2	13.0	11.6	11.8
Pipeline and Hazardous Materials Safety Administration	4.6	9.0	8.7	11.8	17.0	5.0	1.6	16.0	17.2	34.3
Research and Innovative Technology Administration	1.6	1.6	1.3	na	na	na	na	na	na	na
Department of the Treasury	0.6	0.3	0.8	0.6	0.6	2.8	6.9	0.0	11.0	11.0
Bureau of Engraving and Printing	0.6	0.3	0.8	0.6	0.6	2.8	6.9	0.0	11.0	11.0
Department of Veterans Affairs	37.5	37.6	35.0	35.3	18.1	17.8	13.5	29.1	30.3	32.2
Other agencies										
Agency for International Development	0.0	0.0	0.0	0.0	0.0	44.3	0.0	46.2	48.9	48.9
Environmental Protection Agency	85.6	85.7	76.6	77.5	75.2	78.0	76.2	74.5	80.5	76.6
Federal Communications Commission	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.7	0.0	0.0
Library of Congress	0.6	0.6	0.6	0.6	0.6	0.7	1.0	2.5	1.0	1.6
National Aeronautics and Space Administration	4,995.8	5,560.2	4,945.7	5,418.0	5,821.3	6,790.6	6,849.4	5,423.6	5,458.6	5,785.1
Tennessee Valley Authority	NA	NA	NA	NA	NA	NA	3.0	7.3	4.1	2.3

na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level for that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had obligations in variables represented by this table appear in the table. Beginning with FY 2016, the totals reported for development obligations represent a refinement to this category by more narrowly defining it to be "experimental development." Most notably, totals for development do not include the Department of Defense (DOD) Budget Activity 7 (Operational Systems Development) obligations. Those funds, previously included in DOD's development obligation totals, support the development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year. Therefore, the data are not directly comparable with totals reported in previous years. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Science Foundation, National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 116

Federal obligations for research and development, by performer: FYs 1967–2020

(Dollars in millions)

Fiscal year	Total	Intramural ^a	Extramural							Foreign
			United States and U.S. territories							
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
1967	16,529.1	3,395.7	9,877.8	384.7	1,454.3	666.5	400.1	223.5	63.5	63.1
1968	15,921.2	3,493.1	9,047.0	414.2	1,487.4	713.7	377.5	234.5	100.2	53.5
1969	15,640.9	3,501.2	8,703.1	427.1	1,529.2	722.0	364.2	240.7	102.2	51.1
1970	15,338.9	4,079.3	7,770.1	430.7	1,475.6	751.1	444.9	247.4	99.6	40.2
1971	15,542.5	4,228.3	7,587.5	480.2	1,644.6	728.9	458.8	210.2	141.1	63.1
1972	16,495.9	4,589.2	7,716.0	529.9	1,903.5	760.6	514.9	215.4	206.7	59.6
1973	16,800.2	4,762.2	7,731.3	582.4	1,916.6	725.3	578.2	183.1	256.8	64.4
1974	17,410.1	4,910.9	7,752.3	592.8	2,214.0	789.1	672.2	199.3	214.4	65.1
1975	19,038.8	5,354.0	8,423.2	703.7	2,411.4	935.1	702.3	219.9	227.6	61.6
1976	20,779.7	5,768.7	9,340.3	813.8	2,551.8	1,061.1	708.6	231.0	231.2	73.1
1977	23,450.4	6,011.7	10,717.2	1,112.7	2,905.5	1,313.1	800.0	263.9	238.0	88.2
1978	25,845.1	6,810.4	11,400.0	1,242.5	3,374.6	1,311.9	998.2	315.9	268.4	123.2
1979	28,145.1	7,417.5	12,172.4	1,318.1	3,888.8	1,488.3	1,026.5	368.7	310.1	154.7
1980	29,830.4	7,632.3	12,969.1	1,408.1	4,263.4	1,533.3	1,105.6	441.8	265.5	211.2
1981	33,103.9	8,425.7	14,867.9	1,413.9	4,465.8	1,791.0	1,068.8	525.2	222.2	323.4
1982	36,432.6	9,141.0	17,192.2	1,506.4	4,605.5	1,976.7	1,091.7	520.6	184.3	214.3
1983	38,711.5	10,581.9	17,019.7	1,501.2	4,966.4	2,393.9	1,241.6	581.3	186.0	239.5
1984	42,224.9	11,572.3	18,610.4	1,608.4	5,546.9	2,485.8	1,497.3	597.1	130.9	175.8
1985	48,359.6	12,945.4	21,704.9	1,790.8	6,339.7	2,816.4	1,699.2	689.2	129.4	244.5
1986	51,412.4	13,534.9	24,201.2	1,697.0	6,558.8	2,767.7	1,677.0	551.2	128.4	296.3
1987	55,253.7	13,413.1	26,768.2	1,860.0	7,337.3	3,209.6	1,711.4	510.6	148.2	295.3
1988	56,769.4	14,114.6	26,719.2	1,911.3	7,827.7	3,473.9	1,683.2	505.6	142.1	391.8
1989	61,406.5	15,024.6	28,547.9	2,056.3	8,672.0	3,497.1	1,999.9	522.0	167.4	919.4
1990	63,559.5	15,848.9	29,370.0	2,326.8	9,137.5	3,449.8	2,248.2	621.6	213.9	342.6
1991	61,295.2	15,138.2	26,420.6	2,168.3	10,168.5	3,603.8	2,637.4	679.4	215.1	263.9
1992	65,592.6	15,582.8	29,744.8	2,117.0	10,271.2	3,855.5	2,803.6	745.6	184.1	287.9
1993	67,314.0	16,663.3	30,219.0	1,451.3	11,208.4	3,614.2	2,811.9	753.4	320.3	272.2
1994	67,235.4	16,132.1	30,454.9	1,293.5	11,796.9	3,292.9	2,936.9	736.0	325.4	266.8
1995	68,186.8	17,024.8	30,236.1	1,201.8	11,927.5	3,561.6	2,834.1	825.1	316.5	259.2
1996	67,653.0	16,540.4	30,373.8	1,137.0	11,977.8	3,447.1	2,886.8	755.2	246.7	288.3
1997	69,826.8	16,718.2	31,419.3	1,128.2	12,559.0	3,701.0	2,961.6	821.0	261.1	257.5
1998	72,100.7	17,121.5	31,998.6	1,188.9	13,380.7	3,890.2	3,171.3	603.0	447.5	299.1
1999	75,340.6	18,084.7	31,901.7	1,328.0	14,959.1	3,896.4	3,608.7	913.2	357.5	291.4
2000	75,910.3	18,313.2	29,409.1	1,103.7	16,890.7	4,083.4	4,227.8	1,313.1	225.5	343.9
2001	84,492.5	22,046.7	28,236.7	1,381.7	20,065.1	4,840.0	5,390.0	1,602.8	453.3	476.2
2002	93,708.6	23,357.3	34,569.0	1,364.3	21,620.0	4,663.3	5,781.8	1,489.6	453.7	409.6
2003	103,527.7	25,118.5	40,694.5	1,522.3	23,005.8	4,845.1	5,766.0	1,613.5	404.6	557.3
2004	112,074.5	24,573.1	43,758.7	1,572.1	24,947.0	6,493.9	6,480.5	2,307.6	1,235.7	705.8
2005	118,848.5	25,871.1	48,867.9	1,704.6	25,687.5	6,506.3	6,705.3	2,164.2	689.9	651.7
2006	121,729.9	27,675.4	52,754.0	1,440.7	24,669.7	5,549.7	6,063.3	2,127.8	625.3	824.0
2007	127,262.9	29,932.5	55,342.3	2,691.6	25,547.8	4,171.2	5,984.4	2,520.3	362.0	710.6
2008	127,106.1	29,637.9	56,337.6	4,119.9	26,026.5	1,988.6	5,965.0	2,083.0	389.0	558.6
2009	141,090.1	31,543.9	59,749.3	4,067.1	31,557.8	3,402.7	7,049.7	2,730.7	392.0	596.9
2010	140,354.5	30,911.8	59,867.8	3,946.2	31,192.3	3,370.5	7,245.3	2,784.1	426.7	609.9
2011	135,532.6	35,144.7	53,550.2	4,424.5	27,680.3	3,437.8	6,677.7	2,923.7	716.2	977.5
2012	138,524.6	34,366.1	58,910.1	3,611.7	27,509.5	3,694.2	6,388.1	2,752.2	453.2	839.5

TABLE 116

Federal obligations for research and development, by performer: FYs 1967–2020

(Dollars in millions)

Fiscal year	Total	Intramural ^a	Extramural							Foreign
			United States and U.S. territories							
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
2013	125,720.4	32,963.1	49,538.1	3,796.1	25,772.0	3,711.7	6,249.4	2,571.9	385.6	732.4
2014	130,561.3	34,736.1	50,236.5	4,207.5	27,429.3	3,800.8	6,417.5	2,557.1	446.4	730.1
2015	128,753.3	34,925.1	47,483.2	3,935.8	27,414.7	3,911.7	6,288.3	3,271.4	487.0	1,036.0
2016	115,832.8	32,350.8	35,811.1	4,126.2	28,199.3	4,041.4	6,681.9	3,255.2	542.5	824.3
2017	118,974.8	30,990.2	37,875.4	4,075.8	28,963.2	4,445.3	8,140.6	3,173.0	553.4	757.9
2018	129,424.8	35,953.4	39,753.7	4,062.4	31,534.1	4,895.8	8,450.8	3,497.3	561.9	715.4
2019	142,424.2	39,312.8	44,446.0	6,077.6	34,000.5	5,351.9	8,450.2	3,261.5	586.5	937.2
2020 (preliminary)	150,884.7	42,404.9	46,497.8	6,483.8	36,091.9	5,240.7	8,951.4	3,629.7	564.2	1,020.4

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.

Note(s):

Because of rounding, detail may not add to total. FFRDC funding over the years may be affected by the creation of new FFRDCs and the phasing out of other FFRDCs as well as changes in the type of FFRDC administrator. For details, see the notes in the Master Government List of Federally Funded R&D Centers at <http://www.nsf.gov/statistics/ffrdclist/#ffrdc>. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. Beginning with FY 2016, the totals reported for development obligations represent a refinement to this category by more narrowly defining it to be "experimental development." Most notably, totals for development do not include the Department of Defense (DOD) Budget Activity 7 (Operational Systems Development) obligations. Those funds, previously included in DOD's development obligation totals, support the development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year. Therefore, the data are not directly comparable with totals reported in previous years. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 117

Federal obligations for research, by performer: FYs 1967–2020

(Dollars in millions)

Fiscal year	Total	Intramural ^a	Extramural							Foreign
			United States and U.S. territories							
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
1967	4,631.4	1,461.3	1,038.5	69.1	1,312.1	355.0	248.7	47.6	53.2	45.7
1968	4,781.1	1,541.4	1,093.6	64.4	1,301.8	378.9	234.1	40.5	81.9	44.5
1969	4,644.9	1,645.3	886.4	69.9	1,321.8	335.5	221.7	47.6	75.1	41.7
1970	4,900.8	1,903.9	876.5	72.5	1,276.4	382.6	230.5	45.1	83.4	29.9
1971	5,123.2	1,887.9	889.0	75.7	1,430.2	358.9	282.0	52.0	95.8	51.6
1972	5,547.7	1,984.4	906.6	75.3	1,642.8	398.4	342.0	59.9	93.8	44.5
1973	5,581.4	2,088.5	887.3	68.7	1,691.1	355.2	316.2	50.2	84.3	40.0
1974	6,175.2	2,270.2	874.6	98.2	1,958.3	374.0	414.2	50.8	91.0	44.0
1975	6,729.7	2,463.8	1,010.2	135.7	2,078.8	425.5	394.7	64.8	111.9	44.3
1976	7,619.3	2,879.2	1,103.0	176.5	2,249.7	548.3	435.4	57.5	119.4	50.4
1977	8,514.1	2,957.7	1,367.3	192.2	2,583.5	670.3	512.2	55.6	115.2	60.3
1978	9,606.8	3,220.8	1,651.4	235.2	2,928.0	714.9	590.9	66.9	128.8	69.9
1979	10,535.0	3,481.2	1,762.0	245.0	3,333.4	800.6	622.6	73.4	139.5	77.4
1980	11,597.4	3,666.3	2,077.6	311.0	3,699.1	851.2	678.4	71.7	150.9	91.1
1981	12,212.8	4,034.2	1,958.3	351.3	3,920.1	940.6	705.2	67.7	129.3	106.0
1982	13,022.2	4,194.2	2,156.6	487.3	4,045.4	1,056.7	743.5	104.2	125.9	108.3
1983	14,253.5	4,710.3	2,114.2	522.6	4,467.9	1,250.1	836.9	85.2	136.7	129.6
1984	14,978.8	4,764.7	2,137.4	496.5	5,029.7	1,335.9	922.6	87.3	88.2	116.5
1985	16,133.4	5,056.1	2,074.4	485.9	5,726.3	1,421.3	1,045.1	97.0	89.5	137.9
1986	16,502.2	5,160.3	2,280.5	482.1	5,883.4	1,291.7	1,062.9	87.9	91.0	162.4
1987	17,940.5	5,437.7	2,448.6	433.5	6,640.2	1,471.0	1,207.5	89.8	90.2	121.9
1988	18,650.1	5,338.4	2,642.5	455.2	7,022.9	1,564.8	1,300.0	82.9	103.1	140.4
1989	20,765.5	5,897.0	2,875.0	604.3	7,793.1	1,703.4	1,519.8	109.5	121.2	142.1
1990	21,622.4	5,809.8	3,191.6	614.3	8,136.5	1,791.5	1,660.0	137.6	126.4	154.5
1991	23,968.4	6,454.4	3,406.5	709.6	8,867.5	2,160.9	1,925.9	170.9	129.3	143.4
1992	24,490.6	6,523.3	3,451.2	684.9	9,060.7	2,351.8	2,049.6	139.9	109.3	120.0
1993	26,890.5	7,451.8	3,923.8	799.3	9,892.3	2,299.4	2,041.3	173.4	211.8	97.4
1994	27,411.2	7,481.1	4,063.9	737.2	10,291.7	2,181.1	2,102.1	178.4	230.8	144.8
1995	28,434.4	7,684.5	4,698.7	811.6	10,353.8	2,233.6	2,078.7	207.2	221.4	144.8
1996	28,259.8	7,513.2	4,269.1	696.2	10,706.6	2,385.0	2,178.9	195.5	187.4	127.8
1997	29,365.3	7,666.9	4,392.1	759.6	11,173.2	2,598.9	2,294.9	217.5	144.0	118.2
1998	30,922.3	7,969.1	4,632.7	844.1	11,739.0	2,743.0	2,425.2	214.5	240.1	114.5
1999	33,527.5	8,685.8	4,579.8	879.3	13,203.8	2,554.1	2,806.7	469.5	232.4	116.1
2000	38,470.6	9,449.6	4,800.7	700.3	16,021.8	2,773.2	3,714.5	696.1	162.5	152.0
2001	44,713.7	11,130.9	5,262.3	822.3	18,657.1	3,096.3	4,577.9	739.4	308.7	118.9
2002	48,006.7	11,857.4	5,786.8	937.3	20,285.4	3,219.4	4,723.0	749.6	275.5	172.3
2003	51,071.8	12,419.6	6,042.4	1,103.5	21,676.5	3,272.6	5,196.3	779.0	305.8	276.1
2004	53,357.8	12,085.2	6,782.7	1,131.6	22,699.1	3,687.3	5,216.4	795.5	532.9	427.0
2005	53,738.2	12,349.9	6,456.4	1,082.0	23,156.0	3,743.4	5,295.8	907.8	376.8	370.2
2006	53,535.7	12,261.6	6,436.3	947.9	22,809.4	3,783.0	5,448.9	1,028.6	417.9	402.1
2007	54,093.6	11,816.4	6,074.2	1,863.0	23,966.9	2,942.4	5,416.7	1,283.0	297.6	433.3
2008	53,893.7	11,921.7	5,782.4	2,929.7	24,323.2	1,623.1	5,397.5	1,205.7	338.8	371.5
2009	63,691.9	13,318.7	6,280.2	3,070.5	30,168.9	2,148.1	6,500.7	1,462.0	343.6	399.3
2010	63,728.0	13,280.9	6,625.5	2,960.1	29,607.8	2,151.6	6,687.0	1,633.6	352.8	428.6
2011	58,064.8	12,663.4	6,037.4	2,984.4	26,253.2	2,224.4	5,801.9	1,447.7	282.2	370.2
2012	61,986.3	14,293.3	7,794.0	2,678.7	26,289.9	2,856.9	5,854.0	1,457.0	352.2	410.3

TABLE 117

Federal obligations for research, by performer: FYs 1967–2020

(Dollars in millions)

Fiscal year	Total	Intramural ^a	Extramural							Foreign
			United States and U.S. territories							
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
2013	59,532.6	13,416.8	7,365.5	2,713.8	24,771.7	3,089.7	5,779.9	1,686.8	313.5	394.8
2014	63,191.4	14,305.6	8,057.5	3,217.5	26,110.1	3,090.9	5,931.0	1,725.7	394.7	358.5
2015	63,825.4	15,006.5	8,138.4	3,098.0	25,962.1	3,226.8	5,862.7	1,616.9	420.3	493.7
2016	67,104.6	16,054.7	8,370.3	3,533.6	26,863.6	3,224.1	6,270.4	1,891.8	420.2	475.8
2017	69,871.3	15,904.7	8,963.2	3,559.6	27,626.1	3,501.1	7,576.2	1,915.0	453.1	372.3
2018	74,587.6	17,817.5	8,768.1	3,453.6	30,088.6	3,704.6	7,614.5	2,299.8	430.2	410.7
2019	81,117.8	18,298.2	10,738.9	3,666.7	32,381.0	4,882.4	7,891.5	2,270.9	500.4	487.7
2020 (preliminary)	85,262.4	19,465.2	10,832.7	4,214.5	34,389.6	4,730.0	8,177.8	2,436.2	503.7	512.8

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.

Note(s):

Because of rounding, detail may not add to total. FFRDC funding over the years may be affected by the creation of new FFRDCs and the phasing out of other FFRDCs as well as changes in the type of FFRDC administrator. For details, see the notes in the Master Government List of Federally Funded R&D Centers at <http://www.nsf.gov/statistics/ffrdclist/#ffrdc>. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 118

Federal obligations for basic research, by performer: FYs 1967–2020

(Dollars in millions)

Fiscal year	Total	Intramural ^a	Extramural							Foreign
			United States and U.S. territories							
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs		
1967	1,845.8	434.9	180.9	30.3	857.1	203.7	104.9	7.9	4.2	21.9
1968	1,840.6	431.6	195.0	30.1	835.1	225.2	93.4	3.0	11.8	15.5
1969	1,944.8	531.9	184.7	29.8	864.3	219.3	85.5	3.3	13.3	12.6
1970	1,925.9	558.4	185.0	29.7	808.1	237.0	80.1	3.5	13.9	10.1
1971	1,980.1	565.4	166.6	29.2	879.4	227.7	85.2	2.2	16.6	7.9
1972	2,186.9	596.9	151.4	32.2	1,021.4	254.5	96.4	7.2	15.6	11.2
1973	2,232.0	608.1	176.1	39.4	1,048.2	229.0	98.5	3.4	16.2	13.1
1974	2,387.7	695.9	124.0	31.5	1,144.7	223.1	127.1	6.2	16.8	18.3
1975	2,588.4	733.5	118.5	47.9	1,260.6	257.5	128.2	13.8	14.0	14.3
1976	2,767.5	786.0	131.1	59.8	1,341.7	284.9	126.5	7.9	12.9	16.6
1977	3,258.6	914.1	208.1	53.1	1,555.1	324.1	162.5	5.6	15.6	20.4
1978	3,698.6	1,029.3	247.7	65.4	1,759.2	356.8	192.8	5.8	17.1	24.6
1979	4,192.7	1,089.1	277.1	66.6	2,079.9	393.6	240.3	6.7	19.8	19.5
1980	4,674.2	1,182.5	325.3	70.4	2,320.3	436.8	279.5	7.5	23.9	28.1
1981	5,041.3	1,301.8	292.9	73.3	2,503.2	490.6	313.1	8.6	26.5	31.2
1982	5,481.6	1,465.5	270.9	87.4	2,727.1	516.7	355.6	9.0	24.5	24.9
1983	6,260.1	1,689.8	292.9	83.0	3,112.3	604.0	409.6	8.0	32.1	28.5
1984	7,067.4	1,861.1	377.9	91.1	3,530.8	668.9	473.6	8.2	28.1	27.7
1985	7,818.7	1,923.4	380.1	122.6	4,038.7	724.2	555.8	12.4	30.5	30.9
1986	8,153.1	2,018.9	511.6	117.6	4,132.1	724.1	572.1	13.0	30.9	32.7
1987	8,942.4	2,046.2	467.0	119.9	4,665.6	906.7	657.7	13.3	37.5	28.5
1988	9,473.6	2,050.3	596.9	133.0	4,868.3	989.8	728.6	17.7	42.7	46.3
1989	10,602.0	2,313.4	773.2	223.9	5,221.4	1,098.1	838.9	42.2	43.6	47.4
1990	11,285.6	2,294.6	887.5	246.8	5,548.2	1,227.3	924.1	59.2	50.4	47.6
1991	12,170.8	2,391.6	949.9	264.0	6,064.5	1,306.2	1,015.5	80.8	49.1	49.1
1992	12,489.9	2,337.6	920.3	247.2	6,331.8	1,394.1	1,097.2	65.5	42.4	53.8
1993	13,399.1	2,661.8	896.3	243.6	6,833.7	1,402.7	1,164.9	71.3	71.7	53.3
1994	13,523.5	2,497.8	1,109.6	237.6	6,992.3	1,336.0	1,132.9	74.4	75.2	67.6
1995	13,877.0	2,693.5	1,214.2	239.8	6,943.9	1,438.8	1,148.3	75.2	78.7	44.6
1996	14,464.0	2,676.7	1,108.8	272.8	7,443.5	1,521.0	1,234.6	76.1	80.2	50.5
1997	14,941.9	2,688.3	1,166.7	294.7	7,695.8	1,600.0	1,289.6	88.4	68.4	49.9
1998	15,613.0	2,918.5	1,119.4	326.4	7,951.7	1,642.3	1,397.6	121.8	84.9	50.4
1999	17,443.7	3,255.2	1,082.8	313.4	9,107.1	1,565.5	1,650.0	354.9	61.4	53.4
2000	19,569.8	3,621.8	1,356.5	171.3	10,056.7	1,674.0	1,985.3	521.6	75.7	106.9
2001	21,958.1	4,193.8	917.1	175.1	11,792.2	1,762.1	2,441.7	540.5	71.6	64.0
2002	23,668.3	4,460.0	1,231.9	239.6	12,668.2	1,805.2	2,531.7	563.4	71.5	96.8
2003	24,751.4	4,662.1	1,279.6	312.8	13,151.8	1,827.8	2,703.9	582.1	85.4	146.1
2004	26,120.7	4,671.6	1,969.4	292.2	13,398.5	2,005.8	2,746.1	606.8	197.9	232.3
2005	27,140.3	4,772.7	2,051.0	270.1	13,989.9	2,021.2	2,914.2	670.7	235.9	214.6
2006	26,584.6	4,763.6	1,858.9	220.4	13,657.6	2,096.8	2,867.4	755.8	152.7	211.2
2007	26,865.8	4,572.2	1,736.2	341.3	14,220.3	1,982.8	2,793.8	889.5	101.3	228.4
2008	27,154.0	4,767.5	1,545.4	574.9	14,645.7	1,484.3	2,935.2	915.8	75.9	209.1
2009	32,879.4	5,529.8	1,631.6	678.3	18,229.6	1,964.3	3,487.4	1,059.1	94.3	204.8
2010	31,795.3	5,190.9	1,746.9	591.6	17,403.1	1,870.6	3,530.4	1,139.4	103.2	219.2
2011	29,313.6	4,869.8	1,726.5	483.0	15,771.4	2,010.1	3,066.5	1,101.9	75.8	208.7
2012	30,958.9	5,579.4	2,155.3	434.1	15,729.8	2,550.5	3,123.1	1,096.2	80.4	210.0

TABLE 118

Federal obligations for basic research, by performer: FYs 1967–2020

(Dollars in millions)

Fiscal year	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
2013	29,779.4	5,217.2	2,052.3	463.3	14,950.2	2,738.5	2,999.8	1,099.9	66.0	192.3
2014	31,587.9	5,669.4	2,516.0	459.1	15,654.7	2,744.3	3,124.8	1,156.6	78.0	185.0
2015	31,527.1	5,813.7	2,536.5	507.0	15,295.5	2,920.5	2,985.7	1,200.2	61.2	206.7
2016	32,292.7	6,120.5	2,446.5	472.0	15,550.6	2,845.0	3,179.4	1,393.3	81.4	203.9
2017	33,271.5	6,116.1	2,692.3	600.3	15,847.1	3,078.3	3,359.1	1,315.2	66.3	196.6
2018	36,195.1	6,688.7	2,786.8	584.4	17,503.5	3,283.4	3,657.8	1,401.0	87.0	202.5
2019	40,017.3	7,240.4	3,636.6	555.7	18,626.5	4,419.7	3,724.6	1,478.1	86.0	249.5
2020 (preliminary)	41,755.3	7,935.4	3,542.3	553.4	19,635.3	4,261.6	3,889.0	1,576.5	117.9	243.9

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.

Note(s):

Because of rounding, detail may not add to total. FFRDC funding over the years may be affected by the creation of new FFRDCs and the phasing out of other FFRDCs as well as changes in the type of FFRDC administrator. For details, see the notes in the Master Government List of Federally Funded R&D Centers at <http://www.nsf.gov/statistics/ffrdclist/#ffrdc>. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 119

Federal obligations for applied research, by performer: FYs 1967–2020

(Dollars in millions)

Fiscal year	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
1967	2,785.5	1,026.4	857.7	38.8	455.0	151.3	143.9	39.7	49.0	23.9
1968	2,940.5	1,109.8	898.5	34.3	466.7	153.7	140.7	37.5	70.2	29.1
1969	2,700.1	1,113.4	701.7	40.0	457.4	116.2	136.2	44.2	61.8	29.0
1970	2,974.9	1,345.5	691.5	42.8	468.4	145.6	150.3	41.6	69.5	19.8
1971	3,143.0	1,322.5	722.4	46.4	550.8	131.2	196.9	49.8	79.2	43.7
1972	3,360.8	1,387.5	755.2	43.1	621.4	144.0	245.5	52.6	78.2	33.3
1973	3,349.4	1,480.4	711.2	29.3	642.9	126.2	217.7	46.8	68.1	26.9
1974	3,787.6	1,574.3	750.7	66.7	813.5	150.9	287.1	44.6	74.2	25.7
1975	4,141.3	1,730.3	891.7	87.8	818.2	168.0	266.4	51.0	97.9	30.0
1976	4,851.9	2,093.1	971.9	116.7	908.0	263.4	308.9	49.6	106.5	33.8
1977	5,255.5	2,043.6	1,159.1	139.1	1,028.4	346.2	349.6	49.9	99.6	39.9
1978	5,908.2	2,191.5	1,403.7	169.8	1,168.8	358.1	398.1	61.2	111.8	45.3
1979	6,342.3	2,392.1	1,484.9	178.3	1,253.5	407.0	382.3	66.7	119.7	57.9
1980	6,923.2	2,483.8	1,752.3	240.7	1,378.8	414.3	398.9	64.2	127.1	63.0
1981	7,171.5	2,732.4	1,665.4	278.1	1,416.9	450.0	392.1	59.1	102.8	74.8
1982	7,540.6	2,728.7	1,885.7	400.0	1,318.3	540.0	387.9	95.2	101.4	83.4
1983	7,993.4	3,020.4	1,821.3	439.7	1,355.6	646.1	427.3	77.1	104.7	101.1
1984	7,911.4	2,903.6	1,759.5	405.4	1,498.9	667.0	449.0	79.1	60.0	88.8
1985	8,314.7	3,132.7	1,694.3	363.3	1,687.6	697.1	489.3	84.6	58.9	107.0
1986	8,349.1	3,141.5	1,768.8	364.5	1,751.4	567.6	490.8	74.9	60.0	129.7
1987	8,998.1	3,391.5	1,981.6	313.6	1,974.6	564.3	549.8	76.5	52.7	93.4
1988	9,176.5	3,288.1	2,045.6	322.2	2,154.6	575.0	571.3	65.2	60.4	94.1
1989	10,163.5	3,583.5	2,101.8	380.5	2,571.8	605.4	681.0	67.3	77.6	94.6
1990	10,336.8	3,515.2	2,304.2	367.5	2,588.4	564.3	735.9	78.4	76.1	106.9
1991	11,797.6	4,062.8	2,456.6	445.6	2,803.0	854.7	910.4	90.1	80.2	94.3
1992	12,000.7	4,185.7	2,530.9	437.6	2,728.9	957.6	952.5	74.5	66.9	66.2
1993	13,491.4	4,790.0	3,027.5	555.6	3,058.6	896.8	876.4	102.2	140.1	44.1
1994	13,887.7	4,983.3	2,954.4	499.6	3,299.4	845.1	969.2	104.0	155.5	77.2
1995	14,557.4	4,991.0	3,484.5	571.8	3,409.9	794.8	930.4	132.0	142.7	100.3
1996	13,795.7	4,836.5	3,160.3	423.4	3,263.1	864.0	944.3	119.4	107.3	77.4
1997	14,423.4	4,978.6	3,225.5	464.9	3,477.4	998.8	1,005.3	129.2	75.5	68.2
1998	15,309.3	5,050.6	3,513.3	517.7	3,787.3	1,100.7	1,027.7	92.6	155.2	64.1
1999	16,083.9	5,430.6	3,497.0	565.8	4,096.7	988.6	1,156.7	114.6	171.0	62.8
2000	18,900.8	5,827.8	3,444.2	528.9	5,965.1	1,099.2	1,729.2	174.5	86.9	45.1
2001	22,755.6	6,937.2	4,345.2	647.2	6,864.9	1,334.2	2,136.2	198.9	237.1	54.9
2002	24,338.4	7,397.4	4,554.9	697.7	7,617.2	1,414.1	2,191.3	186.2	204.0	75.6
2003	26,320.4	7,757.5	4,762.8	790.7	8,524.7	1,444.8	2,492.5	197.0	220.4	130.0
2004	27,237.1	7,413.6	4,813.3	839.3	9,300.6	1,681.6	2,470.3	188.7	335.0	194.7
2005	26,597.9	7,577.2	4,405.4	811.9	9,166.1	1,722.2	2,381.6	237.1	140.9	155.6
2006	26,951.1	7,498.0	4,577.4	727.5	9,151.8	1,686.2	2,581.5	272.8	265.1	190.9
2007	27,227.8	7,244.2	4,338.0	1,521.6	9,746.6	959.6	2,622.9	393.5	196.3	205.0
2008	26,739.7	7,154.2	4,237.0	2,354.8	9,677.5	138.8	2,462.3	289.9	262.9	162.4
2009	30,812.5	7,788.8	4,648.6	2,392.2	11,939.2	183.8	3,013.3	402.9	249.2	194.5
2010	31,932.6	8,090.1	4,878.6	2,368.5	12,204.7	281.0	3,156.6	494.3	249.6	209.4
2011	28,751.2	7,793.6	4,310.9	2,501.4	10,481.8	214.3	2,735.4	345.8	206.4	161.5
2012	31,027.4	8,713.9	5,638.7	2,244.6	10,560.1	306.3	2,730.9	360.8	271.8	200.3

TABLE 119

Federal obligations for applied research, by performer: FYs 1967–2020

(Dollars in millions)

Fiscal year	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
2013	29,753.2	8,199.6	5,313.3	2,250.5	9,821.6	351.1	2,780.2	587.0	247.5	202.5
2014	31,603.5	8,636.2	5,541.5	2,758.4	10,455.4	346.6	2,806.2	569.1	316.7	173.5
2015	32,298.4	9,192.8	5,601.8	2,591.0	10,666.6	306.3	2,877.0	416.7	359.1	287.0
2016	34,812.0	9,934.2	5,923.8	3,061.6	11,313.1	379.1	3,091.0	498.5	338.8	271.9
2017	36,599.8	9,788.6	6,270.9	2,959.3	11,779.0	422.8	4,217.0	599.8	386.8	175.6
2018	38,392.4	11,128.8	5,981.3	2,869.2	12,585.1	421.2	3,956.7	898.8	343.2	208.1
2019	41,100.5	11,057.9	7,102.3	3,110.9	13,754.5	462.7	4,166.9	792.8	414.4	238.2
2020 (preliminary)	43,507.2	11,529.8	7,290.4	3,661.1	14,754.3	468.4	4,288.8	859.7	385.8	268.8

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.

Note(s):

Because of rounding, detail may not add to total. FFRDC funding over the years may be affected by the creation of new FFRDCs and the phasing out of other FFRDCs as well as changes in the type of FFRDC administrator. For details, see the notes in the Master Government List of Federally Funded R&D Centers at <http://www.nsf.gov/statistics/ffrdclist/#ffrdc>. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 120

Federal obligations for development, by performer: FYs 1967–2020

(Dollars in millions)

Fiscal year	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
1967	11,897.7	1,934.4	8,839.2	315.6	142.2	311.4	151.4	176.0	10.3	17.3
1968	11,140.1	1,951.8	7,953.4	349.9	185.6	334.9	143.4	194.0	18.3	9.0
1969	10,996.0	1,855.9	7,816.7	357.2	207.4	386.5	142.6	193.1	27.0	9.4
1970	10,438.1	2,175.4	6,893.7	358.2	199.1	368.6	214.4	202.3	16.2	10.3
1971	10,419.3	2,340.4	6,698.5	404.5	214.4	370.0	176.8	158.2	45.2	11.4
1972	10,948.2	2,604.8	6,809.5	454.6	260.7	362.1	172.9	155.6	112.9	15.1
1973	11,218.7	2,673.7	6,844.0	513.6	225.5	370.1	262.0	132.8	172.6	24.4
1974	11,234.9	2,640.7	6,877.7	494.6	255.7	415.2	258.1	148.6	123.3	21.0
1975	12,309.1	2,890.2	7,413.0	568.0	332.7	509.6	307.7	155.1	115.7	17.3
1976	13,160.3	2,889.6	8,237.3	637.3	302.1	512.8	273.1	173.5	111.8	22.7
1977	14,936.3	3,054.0	9,350.0	920.6	322.0	642.8	287.9	208.3	122.9	27.9
1978	16,238.4	3,589.7	9,748.6	1,007.3	446.6	597.1	407.3	249.0	139.6	53.2
1979	17,610.1	3,936.3	10,410.5	1,073.1	555.5	687.7	403.8	295.4	170.7	77.3
1980	18,233.1	3,966.1	10,891.5	1,097.0	564.4	682.2	427.1	370.1	114.6	120.1
1981	20,891.1	4,391.5	12,909.6	1,062.6	545.6	850.4	363.6	457.5	92.9	217.5
1982	23,410.4	4,946.8	15,035.6	1,019.1	560.0	920.0	348.1	416.4	58.4	106.0
1983	24,458.0	5,871.7	14,905.5	978.5	498.5	1,143.8	404.7	496.1	49.3	109.9
1984	27,246.1	6,807.6	16,472.9	1,112.0	517.2	1,149.9	574.6	509.8	42.8	59.2
1985	32,226.1	7,889.3	19,630.5	1,304.9	613.5	1,395.1	654.1	592.2	39.9	106.7
1986	34,910.2	8,374.6	21,920.7	1,215.0	675.4	1,476.0	614.1	463.3	37.4	133.9
1987	37,313.2	7,975.3	24,319.6	1,426.4	697.0	1,738.6	503.9	420.8	58.0	173.4
1988	38,119.3	8,776.2	24,076.7	1,456.1	804.8	1,909.1	383.2	422.7	39.0	251.4
1989	40,641.0	9,127.6	25,672.9	1,452.0	878.8	1,793.6	480.0	412.4	46.3	777.3
1990	41,937.1	10,039.1	26,178.4	1,712.5	1,001.0	1,658.3	588.2	484.0	87.5	188.1
1991	37,326.8	8,683.8	23,014.1	1,458.7	1,301.0	1,442.9	711.5	508.5	85.8	120.5
1992	41,102.0	9,059.6	26,293.6	1,432.2	1,210.6	1,503.7	753.9	605.7	74.8	167.9
1993	40,423.5	9,211.6	26,295.2	652.1	1,316.1	1,314.8	770.6	580.0	108.5	174.8
1994	39,824.2	8,650.9	26,390.9	556.3	1,505.2	1,111.8	834.8	557.6	94.7	122.0
1995	39,752.4	9,340.2	25,537.4	390.2	1,573.7	1,328.0	755.4	617.9	95.1	114.4
1996	39,393.3	9,027.2	26,104.7	440.7	1,271.2	1,062.1	707.9	559.7	59.3	160.5
1997	40,461.5	9,051.3	27,027.2	368.6	1,385.7	1,102.1	666.7	603.4	117.1	139.3
1998	41,178.5	9,152.4	27,365.9	344.7	1,641.7	1,147.2	746.0	388.5	207.4	184.6
1999	41,813.1	9,398.9	27,321.8	448.8	1,755.3	1,342.3	802.0	443.7	125.1	175.2
2000	37,439.7	8,863.6	24,608.4	403.4	868.9	1,310.1	513.4	617.1	63.0	191.9
2001	39,778.8	10,915.8	22,974.4	559.4	1,408.0	1,743.7	812.1	863.4	144.6	357.3
2002	45,701.9	11,500.0	28,782.2	427.0	1,334.7	1,443.9	1,058.8	740.0	178.2	237.2
2003	52,455.8	12,698.9	34,652.1	418.9	1,329.3	1,572.5	569.7	834.5	98.8	281.2
2004	58,716.6	12,487.9	36,975.9	440.5	2,247.8	2,806.5	1,264.1	1,512.1	702.8	278.8
2005	65,110.2	13,521.2	42,411.5	622.6	2,531.6	2,762.9	1,409.4	1,256.4	313.1	281.5
2006	68,194.3	15,413.8	46,317.7	492.8	1,860.3	1,766.7	614.4	1,099.2	207.4	421.9
2007	73,169.3	18,116.1	49,268.1	828.6	1,580.9	1,228.8	567.7	1,237.3	64.4	277.3
2008	73,212.4	17,716.1	50,555.2	1,190.2	1,703.3	365.5	567.5	877.3	50.2	187.1
2009	77,398.2	18,225.2	53,469.2	996.6	1,389.0	1,254.6	549.0	1,268.7	48.4	197.6
2010	76,626.5	17,630.9	53,242.3	986.1	1,584.5	1,218.9	558.3	1,150.4	73.9	181.3
2011	77,467.8	22,481.4	47,512.8	1,440.1	1,427.1	1,213.3	875.8	1,476.0	434.0	607.2
2012	76,538.3	20,072.8	51,116.1	933.0	1,219.6	837.3	534.1	1,295.2	101.0	429.2

TABLE 120

Federal obligations for development, by performer: FYs 1967–2020

(Dollars in millions)

Fiscal year	Total	Intramural ^a	Extramural							Foreign
			United States and U.S. territories							
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
2013	66,187.8	19,546.3	42,172.6	1,082.3	1,000.2	622.1	469.5	885.1	72.1	337.6
2014	67,369.9	20,430.5	42,179.1	990.0	1,319.2	709.9	486.5	831.5	51.6	371.6
2015	64,927.8	19,918.5	39,344.9	837.8	1,452.6	684.9	425.6	1,654.5	66.7	542.3
2016	48,728.1	16,296.0	27,440.7	592.6	1,335.7	817.3	411.5	1,363.4	122.4	348.5
2017	49,103.5	15,085.5	28,912.2	516.2	1,337.1	944.1	564.4	1,258.0	100.3	385.6
2018	54,837.2	18,135.9	30,985.5	608.8	1,445.5	1,191.2	836.3	1,197.6	131.7	304.7
2019	61,306.4	21,014.5	33,707.1	2,410.9	1,619.5	469.5	558.7	990.6	86.1	449.5
2020 (preliminary)	65,622.2	22,939.6	35,665.1	2,269.3	1,702.4	510.7	773.5	1,193.5	60.5	507.6

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.

Note(s):

Because of rounding, detail may not add to total. FFRDC funding over the years may be affected by the creation of new FFRDCs and the phasing out of other FFRDCs as well as changes in the type of FFRDC administrator. For details, see the notes in the Master Government List of Federally Funded R&D Centers at <http://www.nsf.gov/statistics/ffrdclist/#ffrdc>. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. Beginning with FY 2016, the totals reported for development obligations represent a refinement to this category by more narrowly defining it to be "experimental development." Most notably, totals for development do not include the Department of Defense (DOD) Budget Activity 7 (Operational Systems Development) obligations. Those funds, previously included in DOD's development obligation totals, support the development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year. Therefore, the data are not directly comparable with totals reported in previous years. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 121

Federal obligations for R&D plant, by performer: FYs 1967–2020

(Dollars in millions)

Fiscal year	Total	Intramural ^a	Extramural							Foreign
			United States and U.S. territories							
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
1967	620.1	239.0	NA	NA	111.7	138.8	NA	NA	130.5	0.1
1968	603.8	294.2	40.9	40.8	98.1	101.7	11.1	9.8	7.3	0.0
1969	669.0	260.4	53.8	87.9	61.9	176.6	4.6	21.2	1.6	0.9
1970	524.4	166.0	41.4	60.9	56.1	169.0	4.7	24.1	2.1	0.1
1971	611.2	202.8	54.0	110.6	49.2	178.7	2.5	3.3	1.2	8.9
1972	602.1	246.6	67.1	75.3	45.3	130.4	28.1	1.8	4.7	2.7
1973	774.3	323.8	76.8	145.0	42.6	162.3	15.8	3.1	3.0	1.9
1974	766.3	308.7	64.3	229.8	25.0	118.4	6.2	2.1	11.9	*
1975	820.7	346.8	62.3	229.7	35.9	131.8	10.5	3.6	0.2	*
1976	836.7	316.8	73.7	205.9	35.2	189.6	10.9	4.7	0.0	0.0
1977	1,367.2	711.9	103.4	215.8	33.7	277.8	6.7	6.1	0.6	11.2
1978	1,295.7	518.0	76.9	257.0	54.6	376.3	4.4	8.3	0.0	0.1
1979	1,475.5	544.8	214.4	224.4	42.0	414.1	9.2	17.7	0.3	8.4
1980	1,555.7	491.1	304.0	256.0	40.3	426.3	8.6	24.6	0.8	3.9
1981	1,485.7	468.0	302.1	246.5	37.0	370.9	41.3	15.1	0.0	4.8
1982	1,389.8	426.0	110.4	362.2	30.3	441.7	6.6	9.4	0.0	3.2
1983	1,297.5	393.9	259.3	166.4	33.6	353.0	82.1	7.9	0.0	1.2
1984	1,787.3	632.8	451.5	196.6	78.5	363.2	55.6	4.2	0.0	4.9
1985	1,820.8	625.3	298.3	187.8	140.8	454.2	69.9	9.1	0.1	35.5
1986	1,538.8	317.1	409.2	215.9	133.2	420.9	11.8	9.6	0.0	21.0
1987	1,846.0	301.6	668.1	212.9	231.1	400.5	20.6	5.4	0.0	5.8
1988	2,057.1	319.6	719.5	204.3	245.8	535.3	23.7	6.2	0.3	2.4
1989	2,165.1	329.5	900.4	212.3	204.9	489.9	14.2	8.4	1.4	4.2
1990	2,271.7	359.0	882.9	231.0	157.3	495.8	113.0	31.4	0.5	0.9
1991	2,852.8	518.8	1,003.1	278.7	253.3	624.2	145.4	19.7	0.6	9.2
1992	2,984.6	506.2	1,014.4	202.2	241.5	579.5	393.9	46.3	0.5	0.0
1993	3,100.7	432.0	1,048.2	124.4	361.4	619.5	415.6	65.5	0.5	33.5
1994	2,215.4	392.6	746.8	119.4	253.2	608.8	20.9	72.9	0.8	0.2
1995	2,256.1	479.8	695.3	95.1	327.3	543.8	25.6	62.6	0.5	26.1
1996	1,746.1	405.1	465.4	43.9	243.1	497.8	23.4	66.1	1.0	0.5
1997	1,926.7	608.3	389.8	60.5	238.6	560.7	16.7	52.0	0.0	0.1
1998	1,813.3	448.4	487.7	45.6	139.5	663.6	10.9	12.1	5.5	0.0
1999	2,045.7	483.3	544.7	172.8	141.2	615.5	12.2	70.7	5.3	*
2000	4,492.8	573.3	2,814.6	27.6	213.5	613.8	55.5	193.5	0.9	0.1
2001	4,069.8	520.4	2,179.8	41.8	284.7	615.9	27.9	357.5	1.4	40.4
2002	4,304.7	414.8	2,524.9	109.1	241.1	583.3	29.1	388.8	2.0	11.7
2003	4,266.5	609.7	1,817.0	145.7	686.9	578.4	70.7	333.9	0.8	23.4
2004	3,994.2	961.3	1,442.0	188.3	354.3	603.9	164.5	252.4	15.8	11.7
2005	3,771.1	859.3	1,381.4	125.7	423.0	558.3	134.6	218.0	55.2	15.6
2006	2,124.8	662.8	265.8	82.7	262.5	519.3	127.3	201.6	2.6	0.3
2007	2,168.4	593.4	401.4	27.6	265.6	498.4	79.7	296.2	0.0	6.1
2008	1,943.9	494.0	449.0	175.6	210.2	334.4	23.7	253.8	*	3.1
2009	3,668.0	804.7	396.3	127.7	607.0	706.5	154.4	868.2	1.2	2.0
2010	6,613.3	1,953.3	1,751.2	167.7	1,532.6	491.4	245.9	465.3	2.0	4.0
2011	4,170.7	846.5	2,030.0	118.3	286.0	242.9	141.3	491.0	0.2	14.6
2012	2,145.7	481.2	460.5	51.8	372.5	248.1	200.8	323.1	*	7.6

TABLE 121

Federal obligations for R&D plant, by performer: FYs 1967–2020

(Dollars in millions)

Fiscal year	Total	Intramural ^a	Extramural							
			United States and U.S. territories							Foreign
			Industry	Industry-administered FFRDCs	Universities and colleges	University-administered FFRDCs	Other nonprofits	Nonprofit-administered FFRDCs	State, local governments	
2013	1,905.1	673.3	231.5	79.5	236.6	246.2	184.1	249.8	0.2	3.9
2014	2,217.6	642.5	323.3	91.2	325.8	308.5	212.8	309.8	0.3	3.4
2015	2,825.1	1,417.2	275.6	101.7	292.2	376.3	151.3	210.6	*	0.1
2016	2,441.0	646.2	344.9	71.3	284.1	591.2	289.8	202.4	0.6	10.5
2017	2,651.8	829.5	333.8	82.4	350.0	585.7	157.8	287.7	0.0	25.0
2018	3,852.7	1,252.1	310.9	214.2	410.4	761.5	180.2	709.4	0.0	14.1
2019	4,376.4	1,092.7	354.0	428.3	514.0	850.0	169.8	956.2	1.2	10.3
2020 (preliminary)	4,759.0	1,652.0	207.5	350.3	427.1	799.3	241.9	1,076.3	1.0	3.5

* = amount greater than \$0 but less than \$50,000. NA = not available; data were not collected at that level for that fiscal year.

FFRDC = federally funded research and development center.

^a Intramural activities cover costs associated with the administration of intramural R&D programs and extramural R&D procurements by federal personnel as well as actual intramural performance.

Note(s):

Because of rounding, detail may not add to total. FFRDC funding over the years may be affected by the creation of new FFRDCs and the phasing out of other FFRDCs as well as changes in the type of FFRDC administrator. For details, see the notes in the Master Government List of Federally Funded R&D Centers at <http://www.nsf.gov/statistics/ffrdclist/#ffrdc>. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 122

Federal obligations for research, by detailed field of science and engineering: FYs 2000–10

(Dollars in millions)

Field	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All fields	38,470.6	44,713.7	48,006.7	51,071.8	53,357.8	53,738.2	53,535.7	54,093.6	53,893.7	63,691.9	63,728.0
Computer sciences and mathematics	2,205.6	2,610.6	2,630.7	2,672.5	2,949.4	2,983.4	2,814.9	2,945.7	3,047.3	3,611.8	3,411.8
Computer sciences	1,659.6	2,022.8	2,043.2	2,052.8	2,144.9	2,157.1	1,987.8	2,077.7	2,053.0	2,422.2	2,362.0
Mathematics	432.9	396.4	402.0	452.9	617.8	686.6	669.2	708.6	782.9	927.9	835.5
Other computer sciences and mathematics	113.1	191.4	185.5	166.7	186.7	139.7	157.9	159.4	211.4	261.6	214.4
Engineering	6,346.4	8,197.0	8,274.9	8,405.1	8,866.4	8,552.9	8,678.7	8,989.7	8,975.5	10,285.0	11,081.2
Aeronautical engineering	1,463.9	2,430.1	2,157.1	1,732.2	1,640.8	1,276.3	1,229.2	929.2	810.3	907.8	830.1
Astronautical engineering	515.0	752.7	760.8	702.5	664.9	494.1	476.3	341.0	288.1	370.2	389.9
Chemical engineering	196.5	199.0	201.6	327.9	318.8	283.8	294.6	353.8	345.6	447.1	509.7
Civil engineering	239.2	288.4	302.7	339.6	330.3	279.2	352.7	461.5	488.0	678.9	699.8
Electrical engineering	744.8	889.7	808.7	950.0	890.9	1,033.5	1,035.5	1,027.5	1,046.5	1,254.0	1,360.9
Mechanical engineering	289.3	319.2	265.9	298.4	301.9	323.7	298.2	337.2	292.4	314.3	363.6
Metallurgy and materials engineering	918.1	1,080.8	1,000.5	1,083.7	1,037.2	1,184.1	1,250.0	1,479.8	1,623.9	1,721.6	1,758.8
Other engineering	1,979.6	2,237.0	2,777.6	2,970.8	3,681.6	3,678.3	3,742.3	4,059.8	4,080.8	4,591.2	5,168.4
Environmental sciences	3,328.8	3,251.7	3,418.3	3,740.9	3,741.6	3,502.6	3,430.6	3,170.5	2,984.6	3,751.1	3,338.9
Atmospheric sciences	1,104.3	1,113.6	1,163.5	1,259.4	1,259.7	1,185.1	1,166.9	964.6	884.5	1,018.1	953.8
Geological sciences	639.2	673.8	674.9	725.0	704.5	673.5	653.9	638.0	517.5	754.0	530.4
Oceanography	673.0	681.1	784.6	846.1	809.1	771.5	745.8	787.8	788.7	834.2	743.7
Other environmental sciences	912.2	783.3	795.2	910.3	968.4	872.5	864.0	780.1	793.9	1,144.8	1,111.0
Life sciences	17,964.7	23,057.3	25,476.8	27,772.2	27,728.5	28,127.8	27,927.7	29,463.6	28,918.8	33,267.1	33,909.1
Agricultural sciences	895.0	1,007.7	1,047.6	1,046.0	1,086.8	1,094.2	1,108.2	1,139.4	1,020.3	1,120.4	1,131.9
Biological sciences (excluding environmental biology)	10,740.0	12,380.0	14,498.5	18,643.5	13,091.9	13,351.6	13,690.8	14,429.7	14,443.1	17,376.8	17,213.9
Environmental biology	740.0	728.8	778.9	717.9	670.0	699.0	686.6	757.2	858.0	963.7	816.4
Medical sciences	4,463.8	6,585.2	6,427.4	6,160.3	10,898.8	10,862.1	10,592.2	10,790.7	10,387.3	11,392.7	11,677.0
Other life sciences	1,125.9	2,355.7	2,724.4	1,204.6	1,981.0	2,120.9	1,849.9	2,346.5	2,210.1	2,413.6	3,070.0
Physical sciences	4,788.0	4,600.8	4,983.2	5,021.6	5,211.1	5,493.7	5,351.1	5,136.1	5,072.6	5,821.1	5,870.8
Astronomy	880.3	759.2	751.5	871.8	920.8	884.9	792.5	655.9	527.9	671.5	559.9
Chemistry	1,225.6	1,024.9	1,181.7	1,137.9	1,191.0	1,197.5	1,126.4	1,149.9	1,148.4	1,274.0	1,310.6
Physics	2,405.4	2,461.7	2,621.4	2,500.2	2,598.6	3,041.3	3,001.8	2,939.2	2,968.9	3,356.1	3,470.1
Other physical sciences	276.7	354.9	428.6	511.7	500.8	370.0	430.5	391.1	427.4	519.6	530.2
Psychology	1,626.7	741.9	905.9	1,104.4	1,854.9	1,891.8	1,747.3	1,837.9	1,740.8	2,086.3	2,155.6
Biological aspects	8.2	13.6	10.6	23.2	6.0	2.3	3.0	3.8	21.8	2.1	13.6
Social aspects	56.0	59.8	52.5	50.6	51.7	46.6	40.9	36.8	18.8	50.8	74.5
Other psychological sciences	1,562.5	668.5	842.8	1,030.6	1,797.2	1,842.8	1,703.4	1,797.3	1,700.3	2,033.4	2,067.4
Social sciences	1,050.4	1,008.6	983.0	1,025.8	1,089.6	1,097.1	1,123.9	1,147.1	977.0	1,156.7	1,197.3
Anthropology	15.9	15.6	16.4	14.5	15.0	18.0	15.1	16.1	17.4	29.4	24.7
Economics	249.5	234.1	227.3	234.5	204.6	215.9	202.6	250.0	212.3	230.1	274.0
Political science	22.6	19.5	18.4	18.5	18.7	32.7	44.6	41.2	29.2	24.6	14.2
Sociology	90.6	95.5	96.1	124.7	120.1	70.2	144.2	217.6	95.2	138.8	132.3
Other social sciences	671.8	644.0	624.7	633.6	731.2	760.4	717.4	622.2	622.9	733.8	752.0
Other sciences nec	1,160.2	1,245.8	1,334.0	1,329.3	1,916.3	2,088.9	2,461.3	1,403.1	2,177.1	3,712.7	2,763.2

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 123

Federal obligations for research, by detailed field of science and engineering: FYs 2011–20

(Dollars in millions)

Field	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
All fields	58,064.8	61,986.3	59,532.6	63,191.4	63,825.4	67,104.6	69,871.3	74,587.6	81,117.8	85,262.4
Computer sciences and mathematics	3,374.3	3,527.5	3,427.0	3,883.2	3,862.7	4,222.8	3,894.2	4,206.9	4,330.0	4,740.3
Computer sciences	2,191.7	2,392.2	2,361.5	2,612.8	2,645.6	2,815.4	2,734.7	2,887.9	2,896.8	NA
Mathematics	891.6	925.3	864.0	979.3	1,005.9	1,160.0	941.7	1,055.2	1,156.9	NA
Other computer sciences and mathematics	291.0	210.1	201.4	291.0	211.2	247.3	217.8	263.8	276.3	NA
Engineering	10,057.2	11,403.4	10,948.2	11,887.5	11,983.6	12,971.5	13,207.4	13,758.6	15,279.3	16,417.4
Aeronautical engineering	845.1	1,814.9	1,842.1	1,833.0	1,825.1	1,836.1	1,892.1	1,118.0	1,199.2	NA
Astronautical engineering	410.1	690.2	737.3	668.7	660.6	650.7	651.4	795.8	829.7	NA
Chemical engineering	474.5	349.6	419.0	535.4	374.6	373.0	302.3	692.3	454.1	NA
Civil engineering	617.1	513.6	446.9	445.1	457.6	461.9	605.9	476.3	566.3	NA
Electrical engineering	1,235.5	1,324.6	1,163.2	1,240.2	897.3	1,062.9	1,102.7	1,009.8	970.6	NA
Mechanical engineering	309.8	372.2	548.6	502.7	323.6	374.2	449.8	498.2	630.1	NA
Metallurgy and materials engineering	1,621.3	1,699.2	1,729.3	1,768.7	1,756.9	1,975.4	1,941.1	1,915.0	1,842.8	NA
Other engineering	4,543.8	4,639.1	4,061.8	4,893.6	5,688.0	6,237.3	6,262.1	7,253.1	8,786.5	NA
Environmental sciences	3,207.2	3,884.3	4,041.0	4,365.8	4,413.7	4,450.4	4,469.6	4,567.6	5,074.7	4,778.3
Atmospheric sciences	953.9	1,469.2	1,542.4	1,567.5	1,567.9	1,597.0	1,651.3	796.3	824.2	NA
Geological sciences	597.8	725.7	626.6	561.0	643.3	562.4	580.3	227.1	239.1	NA
Oceanography	723.7	813.5	787.6	848.0	726.0	773.0	774.3	777.7	819.2	NA
Other environmental sciences	931.7	875.8	1,084.4	1,389.3	1,476.5	1,518.0	1,463.8	2,766.4	3,192.1	NA
Life sciences	29,449.7	31,006.2	29,662.8	30,950.8	30,625.1	32,045.4	34,089.6	36,994.4	38,303.7	40,665.4
Agricultural sciences	1,085.0	942.7	903.1	1,004.2	1,320.3	1,283.1	1,353.4	1,325.0	1,445.5	NA
Biological sciences (excluding environmental biology)	15,178.3	15,458.3	14,588.1	15,310.6	14,839.7	15,922.6	16,555.7	17,828.5	18,910.4	NA
Environmental biology	854.9	796.7	782.0	820.6	819.1	788.1	783.4	922.4	924.2	NA
Medical sciences	10,202.2	11,078.5	10,917.4	11,285.3	11,086.8	11,358.6	12,648.7	13,564.5	13,774.8	NA
Other life sciences	2,129.4	2,729.9	2,472.3	2,530.0	2,559.2	2,693.0	2,748.4	3,353.9	3,248.8	NA
Physical sciences	5,426.6	6,407.5	6,281.9	6,483.1	6,510.3	6,705.6	6,581.5	7,881.4	9,816.1	9,607.6
Astronomy	555.4	1,099.4	1,147.0	1,191.6	1,230.2	1,246.7	1,292.4	887.3	1,583.4	NA
Chemistry	1,106.3	1,103.0	982.2	1,012.7	967.7	998.9	969.2	1,121.2	1,125.5	NA
Physics	3,268.8	3,708.3	3,481.8	3,565.2	3,040.2	3,731.9	3,675.9	3,541.1	3,446.0	NA
Other physical sciences	496.1	496.7	670.9	713.6	1,272.2	728.1	643.9	2,331.7	3,661.3	NA
Psychology	1,886.8	2,086.6	1,935.2	1,968.0	1,994.9	2,021.4	2,081.2	2,326.9	2,753.6	2,932.9
Biological aspects	16.4	14.2	14.3	15.0	19.1	19.8	10.4	19.9	17.5	NA
Social aspects	54.5	61.7	64.9	59.5	58.5	56.0	56.4	48.4	52.7	NA
Other psychological sciences	1,816.0	2,010.8	1,856.0	1,893.5	1,917.2	1,945.6	2,014.4	2,258.5	2,683.3	NA
Social sciences	1,262.4	1,124.5	1,237.3	1,435.1	1,136.3	1,226.7	1,027.2	1,039.4	1,155.7	1,018.3
Anthropology	26.1	30.2	26.3	26.5	29.9	31.5	32.1	34.7	34.9	NA
Economics	398.6	343.5	333.0	344.3	336.8	370.9	294.1	282.4	294.9	NA
Political science	12.0	12.9	11.0	13.4	16.0	14.6	17.6	10.8	14.2	NA
Sociology	132.5	154.7	137.2	157.7	128.2	197.4	178.0	143.2	224.0	NA
Other social sciences	693.2	583.2	729.8	893.2	625.3	612.2	505.4	568.2	587.6	NA
Other sciences nec	3,400.5	2,546.3	1,999.3	2,217.9	3,298.8	3,460.8	4,520.6	3,812.4	4,404.8	5,102.2

NA = not available; data were not collected at that level for that fiscal year.

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 124

Federal obligations for basic research, by detailed field of science and engineering: FYs 2000–10

(Dollars in millions)

Field	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All fields	19,569.8	21,958.1	23,668.3	24,751.4	26,120.7	27,140.3	26,584.6	26,865.8	27,154.0	32,879.4	31,795.3
Computer sciences and mathematics	798.3	957.8	998.7	1,120.2	1,239.1	1,228.4	1,208.2	1,293.5	1,407.4	1,861.4	1,663.2
Computer sciences	463.0	585.6	636.9	730.5	712.2	658.1	670.9	708.3	733.8	978.1	873.6
Mathematics	308.6	288.4	325.6	359.8	479.1	542.5	518.6	561.0	645.0	804.3	716.6
Other computer sciences and mathematics	26.6	83.9	36.2	30.0	47.9	27.8	18.7	24.2	28.6	79.0	73.0
Engineering	1,764.2	1,911.5	1,864.9	1,913.1	2,271.7	2,300.5	2,364.6	2,629.9	2,736.0	3,406.2	3,491.1
Aeronautical engineering	322.8	369.7	330.1	255.8	304.2	317.7	242.7	195.1	149.5	185.3	151.3
Astronautical engineering	88.7	33.9	68.1	59.5	67.1	72.9	57.8	43.8	32.0	35.3	31.6
Chemical engineering	52.6	60.2	62.3	71.5	68.6	66.8	67.6	109.0	111.6	167.6	142.7
Civil engineering	59.7	47.9	46.5	51.1	55.6	62.2	67.4	123.6	126.2	185.5	155.2
Electrical engineering	177.0	246.9	213.0	226.3	199.6	212.6	205.1	246.4	221.4	297.4	295.0
Mechanical engineering	93.4	128.8	89.2	96.3	89.6	76.7	70.5	77.6	65.8	84.3	80.3
Metallurgy and materials engineering	517.8	591.1	507.8	581.0	592.0	665.9	811.4	959.9	993.2	1,112.6	1,091.4
Other engineering	452.2	433.1	547.8	571.7	895.0	825.7	842.1	874.5	1,036.2	1,338.3	1,543.7
Environmental sciences	1,838.4	1,663.0	1,833.3	1,899.5	2,022.9	1,966.1	1,849.5	1,727.8	1,593.1	2,142.9	1,787.4
Atmospheric sciences	717.0	597.2	684.1	668.1	726.8	743.6	666.3	583.6	523.2	650.5	596.9
Geological sciences	429.6	400.6	426.0	461.9	482.0	470.3	444.6	426.8	303.0	429.7	332.6
Oceanography	364.9	402.4	427.0	442.2	452.6	431.1	416.5	436.9	433.6	549.2	471.6
Other environmental sciences	326.9	262.9	296.1	327.3	361.5	321.1	322.2	280.5	333.3	513.5	386.3
Life sciences	10,049.0	12,835.5	14,024.1	14,765.3	14,490.0	15,247.6	14,934.4	15,643.5	15,557.4	17,587.2	17,748.3
Agricultural sciences	445.7	511.7	530.6	528.3	503.7	511.2	514.3	532.9	494.7	531.4	571.4
Biological sciences (excluding environmental biology)	6,851.1	7,952.3	8,379.7	10,471.5	7,222.8	7,608.0	7,699.8	8,075.5	8,258.7	9,600.1	9,417.4
Environmental biology	313.6	309.8	334.5	324.0	329.1	339.0	344.3	350.8	368.2	466.6	435.4
Medical sciences	1,923.8	2,808.6	3,361.0	2,919.1	5,477.2	5,702.7	5,454.4	5,504.0	5,314.3	5,747.6	5,786.9
Other life sciences	514.7	1,253.1	1,418.3	522.3	957.1	1,086.7	921.7	1,180.2	1,121.5	1,241.5	1,537.1
Physical sciences	3,470.6	3,327.1	3,405.9	3,454.0	3,662.6	3,738.7	3,515.5	3,544.5	3,403.1	4,121.0	3,984.1
Astronomy	794.0	650.2	603.3	696.0	765.4	778.4	686.9	592.6	482.5	617.7	504.2
Chemistry	765.8	736.8	748.8	748.6	776.0	764.0	720.7	732.8	725.8	835.4	827.7
Physics	1,764.4	1,762.3	1,861.7	1,820.6	1,904.5	1,995.9	1,910.8	2,012.3	1,986.6	2,370.4	2,377.0
Other physical sciences	146.4	177.9	192.0	188.8	216.7	200.4	197.1	206.8	208.2	297.5	275.1
Psychology	817.8	292.9	464.6	543.8	979.2	1,040.1	944.9	978.8	936.0	1,100.5	1,129.2
Biological aspects	5.7	10.4	7.8	10.6	0.9	0.3	0.7	1.5	0.5	1.9	10.1
Social aspects	14.3	5.5	4.8	4.1	5.0	4.3	4.9	5.4	6.6	18.5	18.4
Other psychological sciences	797.8	277.0	452.0	529.2	973.2	1,035.5	939.3	972.0	928.9	1,080.0	1,100.8
Social sciences	308.0	278.4	361.7	352.8	419.3	391.4	381.0	361.3	330.0	432.2	358.9
Anthropology	14.0	14.1	15.2	12.7	12.9	15.2	14.1	15.3	15.2	27.7	24.3
Economics	51.8	42.5	45.3	48.2	48.0	51.3	46.3	52.3	43.7	52.0	44.4
Political science	5.1	5.9	5.7	6.0	6.7	10.5	11.0	8.5	16.5	13.0	9.6
Sociology	11.8	17.9	19.5	48.7	48.6	17.9	19.2	40.8	14.0	33.3	29.5
Other social sciences	225.4	198.0	276.0	237.1	303.1	296.5	290.3	244.3	240.6	306.1	251.1
Other sciences nec	523.6	691.7	715.2	702.7	1,035.9	1,227.5	1,386.5	686.4	1,190.9	2,227.9	1,633.0

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 125

Federal obligations for basic research, by detailed field of science and engineering: FYs 2011–20

(Dollars in millions)

Field	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
All fields	29,313.6	30,958.9	29,779.4	31,587.9	31,527.1	32,292.7	33,271.5	36,195.1	40,017.3	41,755.3
Computer sciences and mathematics	1,788.5	1,794.9	1,690.8	1,917.7	1,984.5	2,109.7	1,877.3	2,084.6	2,305.9	2,474.2
Computer sciences	936.4	922.4	859.9	958.9	1,024.5	996.9	998.7	1,032.3	1,150.7	NA
Mathematics	741.3	806.2	757.5	824.4	874.1	1,019.3	823.9	942.5	1,038.8	NA
Other computer sciences and mathematics	110.7	66.3	73.4	134.4	85.8	93.4	54.6	109.8	116.4	NA
Engineering	3,168.0	3,458.9	3,407.5	3,544.6	3,694.0	3,657.7	3,685.6	3,585.7	3,618.0	3,811.5
Aeronautical engineering	153.2	401.9	408.9	446.9	468.7	478.6	450.0	99.2	70.9	NA
Astronautical engineering	32.9	79.4	85.0	92.8	98.8	99.3	101.0	8.3	8.7	NA
Chemical engineering	182.7	94.4	84.2	103.7	60.5	69.6	76.2	71.6	74.9	NA
Civil engineering	149.2	35.3	28.2	27.8	54.3	38.0	26.7	13.9	11.5	NA
Electrical engineering	281.0	298.7	259.4	247.8	228.2	227.7	225.0	238.2	219.5	NA
Mechanical engineering	82.3	156.4	146.9	128.6	125.5	122.9	123.8	110.5	103.4	NA
Metallurgy and materials engineering	1,077.2	1,186.1	1,201.1	1,232.8	1,289.9	1,279.3	1,306.5	1,363.5	1,223.1	NA
Other engineering	1,209.5	1,206.7	1,193.9	1,264.2	1,368.0	1,342.3	1,376.4	1,680.4	1,906.0	NA
Environmental sciences	1,796.4	2,258.7	2,395.8	2,753.0	2,738.4	2,765.0	2,686.8	2,996.4	3,251.8	2,922.3
Atmospheric sciences	612.5	952.3	994.8	1,036.6	1,051.4	1,080.4	1,087.8	508.1	513.7	NA
Geological sciences	396.4	501.5	411.2	417.8	432.7	433.1	439.0	182.6	200.3	NA
Oceanography	483.0	494.4	456.5	482.7	431.8	441.7	384.5	418.6	432.1	NA
Other environmental sciences	304.5	310.3	533.2	815.8	822.4	809.8	775.5	1,887.2	2,105.6	NA
Life sciences	15,373.4	16,015.8	15,317.3	16,019.0	15,209.7	15,577.0	16,573.8	18,176.1	18,880.6	20,206.5
Agricultural sciences	547.0	480.4	462.4	513.7	554.2	566.1	584.2	596.6	634.6	NA
Biological sciences (excluding environmental biology)	8,277.1	8,317.4	7,918.8	8,283.6	7,758.4	8,026.1	8,573.3	9,158.9	9,785.8	NA
Environmental biology	434.6	406.6	384.4	394.8	398.6	380.5	371.9	513.6	490.2	NA
Medical sciences	5,085.5	5,528.0	5,325.9	5,564.2	5,270.5	5,337.2	5,717.3	6,414.9	6,389.2	NA
Other life sciences	1,029.2	1,283.4	1,225.8	1,262.7	1,228.0	1,267.1	1,327.2	1,492.1	1,580.8	NA
Physical sciences	3,815.0	4,556.7	4,432.2	4,637.5	4,620.8	4,706.9	4,717.4	5,930.8	7,907.0	7,716.1
Astronomy	498.8	925.0	973.9	1,036.0	1,073.5	1,093.0	1,139.5	878.9	1,577.2	NA
Chemistry	774.3	776.3	714.7	722.1	672.4	688.0	694.5	738.9	691.3	NA
Physics	2,275.2	2,568.0	2,468.8	2,576.0	2,569.2	2,593.2	2,597.2	2,517.8	2,570.6	NA
Other physical sciences	266.7	287.4	274.8	303.4	305.7	332.7	286.2	1,795.2	3,067.8	NA
Psychology	978.8	1,087.8	1,016.0	1,037.6	999.9	989.8	1,027.3	1,147.3	1,366.1	1,471.7
Biological aspects	13.4	13.1	13.8	13.7	14.2	15.7	10.0	19.4	16.1	NA
Social aspects	16.9	13.3	16.4	13.2	13.6	11.7	13.5	10.3	10.6	NA
Other psychological sciences	948.5	1,061.5	985.8	1,010.7	972.1	962.4	1,003.8	1,117.6	1,339.4	NA
Social sciences	371.0	381.4	373.8	386.1	344.7	378.1	359.3	374.1	451.2	428.9
Anthropology	25.8	26.8	24.1	24.1	28.2	29.4	28.9	31.0	32.7	NA
Economics	54.5	54.6	58.4	58.2	47.3	50.5	56.3	52.5	85.7	NA
Political science	9.3	10.3	8.9	12.1	12.4	13.7	12.1	9.0	10.3	NA
Sociology	35.5	38.7	24.4	30.8	26.7	24.2	23.2	24.0	36.7	NA
Other social sciences	245.9	251.0	258.1	260.9	230.1	260.2	238.7	257.6	285.9	NA
Other sciences nec	2,022.6	1,404.6	1,145.8	1,292.5	1,935.1	2,108.5	2,344.2	1,900.0	2,236.8	2,724.1

NA = not available; data were not collected at that level for that fiscal year.

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 126

Federal obligations for applied research, by detailed field of science and engineering: FYs 2000–10

(Dollars in millions)

Field	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All fields	18,900.8	22,755.6	24,338.4	26,320.4	27,237.1	26,597.9	26,951.1	27,227.8	26,739.7	30,812.5	31,932.6
Computer sciences and mathematics	1,407.3	1,652.8	1,632.0	1,552.2	1,710.3	1,754.9	1,606.7	1,652.1	1,639.8	1,750.3	1,748.6
Computer sciences	1,196.6	1,437.2	1,406.3	1,322.3	1,432.7	1,499.0	1,316.9	1,369.4	1,319.2	1,444.1	1,488.4
Mathematics	124.3	108.0	76.4	93.2	138.7	144.1	150.5	147.5	137.8	123.6	118.9
Other computer sciences and mathematics	86.5	107.6	149.3	136.7	138.9	111.9	139.3	135.2	182.8	182.7	141.4
Engineering	4,582.2	6,285.5	6,410.0	6,492.0	6,594.7	6,252.5	6,314.2	6,359.8	6,239.5	6,878.8	7,590.0
Aeronautical engineering	1,141.1	2,060.3	1,827.0	1,476.5	1,336.6	958.6	986.5	734.0	660.8	722.5	678.8
Astronautical engineering	426.3	718.9	692.6	643.0	597.8	421.2	418.6	297.2	256.1	334.9	358.3
Chemical engineering	143.9	138.9	139.2	256.4	250.2	217.0	227.0	244.8	234.0	279.4	366.9
Civil engineering	179.5	240.5	256.1	288.5	274.7	217.1	285.2	337.9	361.8	493.4	544.6
Electrical engineering	567.7	642.8	595.6	723.7	691.3	820.9	830.3	781.1	825.1	956.6	1,065.9
Mechanical engineering	195.9	190.4	176.7	202.2	212.3	247.0	227.7	259.5	226.6	230.1	283.3
Metallurgy and materials engineering	400.3	489.7	492.8	502.7	445.2	518.2	438.6	519.9	630.7	609.0	667.4
Other engineering	1,527.4	1,803.9	2,229.9	2,399.1	2,786.6	2,852.5	2,900.2	3,185.3	3,044.6	3,252.9	3,624.7
Environmental sciences	1,490.3	1,588.6	1,585.0	1,841.4	1,718.7	1,536.5	1,581.1	1,442.7	1,391.5	1,608.2	1,551.5
Atmospheric sciences	387.3	516.4	479.4	591.3	532.9	441.5	500.7	380.9	361.3	367.6	356.9
Geological sciences	209.6	273.2	248.9	263.1	222.5	203.2	209.3	211.2	214.5	324.3	197.7
Oceanography	308.1	278.7	357.6	403.9	356.5	340.4	329.4	350.9	355.1	285.0	272.1
Other environmental sciences	585.3	520.4	499.1	583.0	606.9	551.4	541.8	499.6	460.6	631.3	724.8
Life sciences	7,915.7	10,221.8	11,452.7	13,007.0	13,238.5	12,880.2	12,993.3	13,820.1	13,361.5	15,679.9	16,160.8
Agricultural sciences	449.2	496.0	517.1	517.7	583.1	583.0	593.9	606.5	525.6	589.0	560.4
Biological sciences (excluding environmental biology)	3,888.9	4,427.7	6,118.8	8,172.0	5,869.1	5,743.6	5,991.1	6,354.2	6,184.4	7,776.7	7,796.5
Environmental biology	426.4	419.0	444.4	393.8	340.8	360.0	342.3	406.4	489.9	497.0	380.9
Medical sciences	2,540.0	3,776.6	3,066.4	3,241.2	5,421.5	5,159.4	5,137.8	5,286.7	5,073.0	5,645.1	5,890.1
Other life sciences	611.2	1,102.6	1,306.0	682.3	1,023.9	1,034.2	928.2	1,166.3	1,088.6	1,172.1	1,532.9
Physical sciences	1,317.3	1,273.6	1,577.4	1,567.6	1,548.6	1,755.0	1,835.6	1,591.6	1,669.5	1,700.1	1,886.7
Astronomy	86.3	109.0	148.2	175.8	155.4	106.5	105.5	63.3	45.4	53.8	55.7
Chemistry	459.8	288.1	432.9	389.3	415.0	433.5	405.7	417.1	422.6	438.6	482.9
Physics	641.0	699.5	759.6	679.6	694.0	1,045.4	1,091.0	926.9	982.4	985.7	1,093.0
Other physical sciences	130.3	177.0	236.6	322.9	284.1	169.6	233.4	184.3	219.2	222.0	255.1
Psychology	808.9	449.0	441.3	560.6	875.6	851.6	802.4	859.1	804.8	985.9	1,026.4
Biological aspects	2.5	3.2	2.8	12.7	5.0	2.0	2.3	2.3	21.2	0.2	3.5
Social aspects	41.7	54.3	47.7	46.5	46.6	42.3	36.0	31.4	12.2	32.3	56.2
Other psychological sciences	764.7	391.5	390.8	501.5	824.0	807.3	764.1	825.3	771.4	953.3	966.6
Social sciences	742.4	730.2	621.3	673.0	670.3	705.8	742.9	785.9	647.0	724.5	838.4
Anthropology	1.9	1.5	1.2	1.8	2.1	2.8	1.0	0.8	2.2	1.6	0.4
Economics	197.7	191.5	182.1	186.2	156.7	164.6	156.3	197.7	168.6	178.1	229.6
Political science	17.5	13.6	12.7	12.5	12.0	22.2	33.6	32.7	12.7	11.6	4.7
Sociology	78.8	77.6	76.6	76.0	71.5	52.2	124.9	176.8	81.2	105.5	102.8
Other social sciences	446.5	446.0	348.7	396.5	428.0	463.9	427.1	377.9	382.2	427.7	500.9
Other sciences nec	636.6	554.1	618.8	626.6	880.5	861.4	1,074.9	716.7	986.2	1,484.8	1,130.2

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 127

Federal obligations for applied research, by detailed field of science and engineering: FYs 2011–20

(Dollars in millions)

Field	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
All fields	28,751.2	31,027.4	29,753.2	31,603.5	32,298.4	34,812.0	36,599.8	38,392.4	41,100.5	43,507.2
Computer sciences and mathematics	1,585.9	1,732.6	1,736.2	1,965.5	1,878.2	2,113.1	2,016.9	2,122.3	2,024.0	2,266.1
Computer sciences	1,255.2	1,469.7	1,501.7	1,654.0	1,621.1	1,818.5	1,736.0	1,855.6	1,746.1	NA
Mathematics	150.3	119.1	106.5	154.9	131.8	140.7	117.7	112.7	118.1	NA
Other computer sciences and mathematics	180.4	143.8	128.0	156.6	125.4	153.9	163.2	154.0	159.9	NA
Engineering	6,889.2	7,944.5	7,540.7	8,343.0	8,289.7	9,313.9	9,521.8	10,172.8	11,661.4	12,605.9
Aeronautical engineering	691.9	1,413.0	1,433.2	1,386.2	1,356.4	1,357.5	1,442.2	1,018.8	1,128.2	NA
Astronautical engineering	377.2	610.8	652.3	575.9	561.9	551.4	550.4	787.5	821.0	NA
Chemical engineering	291.8	255.2	334.8	431.7	314.1	303.3	226.1	620.7	379.2	NA
Civil engineering	467.9	478.3	418.7	417.3	403.3	424.0	579.2	462.4	554.8	NA
Electrical engineering	954.4	1,025.9	903.9	992.4	669.0	835.2	877.7	771.6	751.2	NA
Mechanical engineering	227.5	215.7	401.7	374.1	198.1	251.3	325.9	387.7	526.7	NA
Metallurgy and materials engineering	544.0	513.1	528.2	536.0	467.0	696.1	634.6	551.5	619.7	NA
Other engineering	3,334.4	3,432.4	2,867.8	3,629.4	4,320.0	4,895.0	4,885.7	5,572.7	6,880.6	NA
Environmental sciences	1,410.7	1,625.6	1,645.2	1,612.9	1,675.4	1,685.4	1,782.8	1,571.1	1,822.9	1,856.0
Atmospheric sciences	341.4	516.9	547.6	530.9	516.5	516.6	563.5	288.2	310.5	NA
Geological sciences	201.4	224.1	215.4	143.2	210.6	129.3	141.3	44.6	38.8	NA
Oceanography	240.7	319.1	331.1	365.3	294.2	331.3	389.7	359.1	387.1	NA
Other environmental sciences	627.2	565.5	551.1	573.5	654.2	708.2	688.3	879.2	1,086.5	NA
Life sciences	14,076.3	14,990.3	14,345.5	14,931.8	15,415.4	16,468.4	17,515.8	18,818.3	19,423.1	20,458.9
Agricultural sciences	538.0	462.3	440.7	490.5	766.1	717.0	769.3	728.4	810.9	NA
Biological sciences (excluding environmental biology)	6,901.2	7,141.0	6,669.3	7,027.0	7,081.3	7,896.5	7,982.4	8,669.6	9,124.6	NA
Environmental biology	420.3	390.0	397.6	425.8	420.5	407.5	411.5	408.9	434.0	NA
Medical sciences	5,116.7	5,550.5	5,591.5	5,721.1	5,816.3	6,021.3	6,931.4	7,149.6	7,385.6	NA
Other life sciences	1,100.1	1,446.5	1,246.5	1,267.4	1,331.2	1,426.0	1,421.1	1,861.8	1,668.0	NA
Physical sciences	1,611.6	1,850.8	1,849.7	1,845.6	1,889.5	1,998.7	1,864.1	1,950.7	1,909.2	1,891.6
Astronomy	56.6	174.4	173.1	155.6	156.7	153.7	152.9	8.4	6.2	NA
Chemistry	332.0	326.7	267.4	290.6	295.3	310.9	274.8	382.3	434.2	NA
Physics	993.6	1,140.3	1,013.0	989.2	471.0	1,138.7	1,078.7	1,023.4	875.3	NA
Other physical sciences	229.4	209.3	396.1	410.3	966.4	395.4	357.7	536.6	593.4	NA
Psychology	908.1	998.8	919.2	930.5	995.0	1,031.6	1,053.9	1,179.6	1,387.5	1,461.3
Biological aspects	3.0	1.1	0.5	1.4	4.9	4.1	0.5	0.5	1.4	NA
Social aspects	37.6	48.4	48.5	46.2	44.9	44.3	42.9	38.1	42.1	NA
Other psychological sciences	867.5	949.3	870.2	882.8	945.2	983.2	1,010.6	1,140.9	1,343.9	NA
Social sciences	891.4	743.1	863.4	1,049.0	791.6	848.6	667.9	665.3	704.5	589.4
Anthropology	0.3	3.4	2.3	2.4	1.7	2.1	3.1	3.7	2.3	NA
Economics	344.1	289.0	274.6	286.1	289.5	320.4	237.8	229.9	209.2	NA
Political science	2.7	2.6	2.1	1.3	3.6	1.0	5.4	1.8	3.9	NA
Sociology	97.0	116.0	112.8	126.9	101.5	173.2	154.8	119.2	187.4	NA
Other social sciences	447.3	332.2	471.7	632.2	395.2	352.0	266.7	310.7	301.7	NA
Other sciences nec	1,377.9	1,141.7	853.5	925.4	1,363.7	1,352.3	2,176.5	1,912.4	2,168.0	2,378.1

NA = not available; data were not collected at that level for that fiscal year.

nec = not elsewhere classified.

Note(s):

Because of rounding, detail may not add to total. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 128

Federal obligations for research and development for selected agencies, by state or location: FYs 2000–10

(Dollars in millions)

State or location	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All locations	74,301.3	82,618.0	91,816.0	101,366.4	109,732.9	116,585.5	119,302.2	124,900.3	125,091.8	138,975.5	138,156.5
Alabama	1,670.1	2,456.8	2,734.8	3,211.8	3,035.5	3,108.2	2,198.2	2,247.6	2,782.2	3,023.3	3,476.9
Alaska	155.2	254.4	299.9	399.4	461.3	495.1	212.1	264.0	222.2	247.3	235.6
Arizona	1,151.9	1,881.0	2,279.2	2,385.4	2,643.7	2,958.8	2,459.6	2,422.4	2,449.2	3,141.5	3,425.6
Arkansas	116.3	183.9	141.3	145.4	146.7	165.0	161.8	177.7	145.3	171.2	181.8
California	14,819.4	13,001.7	19,198.5	20,169.6	19,259.4	19,964.3	26,897.6	26,987.2	19,938.7	26,988.8	27,226.9
Colorado	1,398.9	1,450.6	1,728.4	1,735.0	2,068.0	2,264.9	2,188.7	2,797.5	2,668.1	3,862.3	4,348.3
Connecticut	806.2	1,377.4	2,816.7	2,068.0	2,122.5	2,399.6	1,946.6	2,116.8	1,815.4	2,364.5	2,193.5
Delaware	69.9	83.5	80.6	95.4	89.7	94.2	112.7	130.6	144.3	225.2	129.1
District of Columbia	2,443.1	2,776.0	3,145.6	2,985.5	3,329.4	4,161.8	4,193.2	4,277.7	17,537.2	4,265.5	3,890.1
Florida	2,286.5	2,774.0	2,542.0	2,854.1	3,265.0	2,590.0	3,346.5	4,078.2	2,290.4	3,734.4	3,142.2
Georgia	2,654.0	3,438.3	2,229.0	2,133.0	1,906.5	2,181.8	1,750.8	1,686.2	1,386.0	1,957.6	1,520.0
Hawaii	234.3	435.7	428.3	413.9	488.2	600.3	380.3	379.2	347.8	387.5	389.4
Idaho	217.3	209.3	235.5	217.8	288.5	290.3	300.0	287.5	355.4	388.0	479.0
Illinois	1,496.8	1,825.1	1,728.6	1,934.7	1,880.1	2,127.8	2,003.5	2,145.1	2,168.5	2,745.5	2,631.3
Indiana	512.8	568.8	537.6	573.7	556.7	566.8	583.2	596.6	672.0	1,109.2	988.7
Iowa	275.6	361.5	463.4	499.5	538.3	487.7	548.7	662.4	634.9	683.2	909.1
Kansas	224.0	306.7	290.5	268.7	287.4	357.8	294.5	317.8	300.4	464.2	347.5
Kentucky	253.5	370.4	321.5	246.7	251.8	296.3	240.0	222.2	252.5	319.1	287.4
Louisiana	249.0	275.8	432.7	453.4	446.7	443.7	322.6	419.4	406.1	405.6	330.8
Maine	249.8	450.7	255.6	166.7	210.3	292.1	229.2	378.8	168.0	194.2	163.1
Maryland	8,778.5	9,473.7	7,420.0	8,027.3	12,608.6	12,500.8	12,746.6	11,905.8	13,312.7	15,970.5	15,879.0
Massachusetts	4,552.3	4,499.8	4,920.7	5,491.7	5,963.6	6,591.9	6,875.8	7,528.9	6,883.1	9,047.0	8,747.5
Michigan	1,005.0	1,196.4	1,254.1	1,693.1	1,117.8	1,177.0	1,700.3	1,726.1	1,866.5	2,427.4	2,509.7
Minnesota	797.3	900.9	1,152.8	866.2	831.3	768.3	1,241.6	1,386.8	1,393.0	1,550.6	1,062.6
Mississippi	413.8	415.7	627.7	1,181.0	1,598.7	438.2	554.9	433.9	435.2	384.6	421.6
Missouri	905.9	927.0	1,241.1	1,349.5	3,058.8	4,201.7	1,315.6	1,220.6	1,111.3	1,284.6	1,151.0
Montana	105.4	136.8	113.7	131.2	188.8	182.1	151.3	653.6	159.5	171.5	139.2
Nebraska	104.1	145.2	153.8	168.0	210.5	193.1	178.1	230.1	204.6	220.2	239.8
Nevada	273.3	360.2	342.5	418.9	555.0	593.3	436.2	321.1	312.6	558.2	379.8
New Hampshire	357.8	474.4	312.3	511.9	422.1	513.8	400.4	339.9	294.3	458.4	350.5
New Jersey	1,979.3	1,674.0	2,109.1	2,087.6	2,273.7	2,524.8	2,172.7	2,192.0	2,192.7	2,492.2	2,853.0
New Mexico	2,210.5	2,890.6	2,877.0	3,090.1	3,363.2	3,593.4	3,315.0	3,478.0	3,502.9	3,695.6	3,338.0
New York	2,989.7	3,528.3	3,820.6	4,382.5	4,505.3	5,320.1	5,368.2	5,367.6	4,651.2	6,242.0	5,602.2
North Carolina	1,062.5	1,400.9	1,393.0	1,617.3	1,683.6	1,806.1	1,771.4	1,828.4	1,772.6	2,021.8	2,151.2
North Dakota	64.1	77.9	104.7	107.3	108.6	117.9	117.9	115.8	98.3	101.2	119.6
Ohio	2,164.6	3,051.1	2,380.4	2,967.1	2,794.2	2,961.5	2,723.9	3,660.9	2,580.4	4,459.5	4,098.8
Oklahoma	232.2	324.0	276.1	570.2	498.5	400.7	271.1	253.2	260.8	370.0	429.6
Oregon	468.2	522.6	504.0	514.2	504.8	650.1	510.1	506.4	581.1	635.2	675.3
Pennsylvania	2,396.1	2,772.1	3,245.0	3,989.3	3,731.1	3,677.4	3,299.7	3,359.9	3,279.4	4,297.6	4,963.4
Rhode Island	418.0	437.5	501.5	565.6	642.1	888.8	622.5	627.8	643.7	679.5	669.8
South Carolina	249.9	314.3	371.0	454.0	384.3	492.7	373.8	421.7	453.0	661.6	662.2
South Dakota	38.8	54.9	58.7	54.8	70.0	70.0	75.9	61.9	76.4	79.3	75.0
Tennessee	824.3	1,039.5	1,157.2	1,130.6	1,382.0	1,426.0	1,489.1	1,907.9	1,689.9	2,081.4	2,104.8
Texas	3,021.0	3,189.4	3,553.9	5,414.4	5,506.7	5,187.0	5,914.7	6,692.8	5,029.6	6,031.1	6,896.1
Utah	306.0	421.6	457.9	803.4	1,183.7	1,058.2	845.8	991.3	699.9	1,168.5	1,708.9
Vermont	72.0	112.7	136.4	201.1	417.1	262.6	105.5	108.4	121.0	151.4	142.3
Virginia	4,961.5	4,995.7	6,175.9	6,709.2	7,298.3	8,746.5	8,994.3	9,088.2	9,282.2	9,381.3	9,111.7
Washington	1,345.6	1,725.3	2,023.3	2,442.2	2,311.3	2,641.2	4,087.1	4,751.1	4,339.5	4,156.7	3,915.5

TABLE 128

Federal obligations for research and development for selected agencies, by state or location: FYs 2000–10

(Dollars in millions)

State or location	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
West Virginia	235.7	376.1	254.2	383.4	315.7	807.5	301.4	219.1	224.6	262.6	312.8
Wisconsin	420.8	487.9	595.5	658.4	645.9	651.8	635.7	671.4	660.9	885.7	795.6
Wyoming	35.1	37.0	39.6	43.0	47.6	37.5	36.2	36.6	47.4	65.2	36.7
Outlying areas	117.9	142.6	288.2	323.3	135.0	160.6	161.2	178.4	160.3	237.2	263.2
Puerto Rico	81.0	90.8	135.3	112.2	100.9	101.4	98.8	85.9	84.9	96.1	94.8
Other areas ^a	36.9	51.8	152.9	211.1	34.1	59.2	62.4	92.5	75.4	141.1	168.4
Offices abroad ^b	109.1	30.3	64.4	60.9	99.4	96.5	138.0	39.9	86.8	67.8	54.0

^a Includes American Samoa, Baker Island, Guam, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Islands, Navassa Island, Northern Mariana Islands, Palmyra Atoll, U.S. Virgin Islands, and Wake Island.

^b Includes R&D performed or administered in foreign countries by the U.S. government.

Note(s):

Because of rounding, detail may not add to total. Eleven agencies are required to report data for this section of the survey: the Departments of Agriculture, Commerce, Defense, Energy, Health and Human Services, Homeland Security, the Interior, and Transportation; the Environmental Protection Agency; the National Aeronautics and Space Administration; and the National Science Foundation. Obligations of these 11 agencies represented more than 97% of total federal R&D obligations in FY 2019. Although the nongeographic historical tables incorporate corrections to previously reported data that have been submitted by reporting agencies, corresponding corrections to geographic distributions are rarely obtainable. Geographic distribution of Department of Defense development funding to industry reflects location of prime contractors and not the numerous subcontractors who perform much of the R&D. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 129

Federal obligations for research and development for selected agencies, by state or location: FYs 2011–19

(Dollars in millions)

State or location	2011	2012	2013	2014	2015	2016	2017	2018	2019
All locations	132,793.6	135,995.4	122,985.2	127,927.2	125,846.3	113,002.0	115,507.6	125,737.3	138,170.3
Alabama	5,202.1	5,159.1	4,716.4	4,483.7	4,538.0	4,354.3	8,662.5	5,173.7	5,414.5
Alaska	196.5	159.1	185.5	136.9	208.0	211.9	280.0	299.8	334.2
Arizona	2,917.0	2,405.2	2,369.3	1,606.0	1,643.7	1,549.4	1,198.8	1,737.0	2,001.2
Arkansas	178.6	183.8	167.3	190.9	105.6	307.5	170.0	206.2	179.0
California	22,768.9	18,036.3	16,180.8	15,798.7	15,280.6	15,756.5	15,886.7	17,236.9	19,158.6
Colorado	3,815.5	3,744.7	3,394.0	3,611.4	3,506.4	4,183.1	3,395.6	4,916.8	5,267.9
Connecticut	2,426.0	2,231.1	2,516.6	2,287.0	2,292.8	2,365.9	2,349.3	2,568.2	2,673.2
Delaware	114.7	108.7	112.3	130.1	108.1	142.0	168.6	161.6	163.1
District of Columbia	3,013.5	3,339.3	3,908.1	3,980.1	4,221.7	4,204.5	4,867.4	6,157.7	6,228.2
Florida	2,481.8	2,355.8	2,282.0	2,447.6	2,932.7	2,781.5	2,879.5	3,178.5	3,892.0
Georgia	1,421.8	1,133.3	1,130.0	1,253.1	1,182.4	1,301.3	1,284.7	1,349.8	1,503.9
Hawaii	403.6	382.5	348.0	326.5	305.4	283.8	275.4	441.3	411.9
Idaho	430.2	446.9	380.8	597.9	532.6	568.4	679.1	824.2	919.9
Illinois	2,878.1	2,399.5	2,327.5	2,368.6	2,482.7	3,922.1	2,552.9	2,911.1	2,998.3
Indiana	903.0	838.3	692.6	771.2	678.3	719.1	689.8	781.3	894.1
Iowa	695.3	613.3	560.5	512.2	567.0	496.2	520.0	525.0	517.8
Kansas	367.8	231.6	234.3	187.1	193.7	187.9	211.6	232.8	282.6
Kentucky	242.0	308.1	306.8	296.7	296.7	272.6	289.5	302.8	313.4
Louisiana	597.3	313.8	278.0	284.5	253.7	278.5	397.2	321.1	432.1
Maine	180.0	247.8	169.9	131.1	138.0	137.5	158.0	188.4	189.0
Maryland	15,750.6	15,597.8	15,605.9	16,890.5	16,750.6	16,640.3	15,416.8	17,779.2	16,992.3
Massachusetts	7,758.4	6,279.3	5,690.8	6,268.5	6,055.0	5,532.6	5,238.4	6,036.0	6,837.8
Michigan	2,153.4	2,206.4	1,826.1	1,852.7	1,799.0	1,795.9	1,491.4	1,630.5	2,053.7
Minnesota	949.3	961.1	939.7	947.4	817.4	859.1	985.8	1,031.0	1,029.4
Mississippi	588.1	542.6	567.7	589.5	489.0	448.2	449.5	819.8	505.1
Missouri	1,193.3	1,122.8	1,056.3	1,038.6	1,296.3	1,258.6	1,603.8	1,492.0	2,375.1
Montana	181.7	190.2	134.5	170.5	152.2	169.5	151.0	194.7	191.4
Nebraska	262.2	261.9	200.5	234.1	216.4	204.8	210.6	211.3	243.7
Nevada	478.1	481.7	584.6	510.0	394.2	286.2	338.4	400.2	375.1
New Hampshire	406.0	490.7	296.2	335.9	342.1	373.5	351.1	472.4	669.3
New Jersey	2,582.7	2,167.0	1,726.9	1,968.5	1,631.9	1,676.6	1,962.6	2,367.3	2,834.4
New Mexico	3,456.2	3,378.6	3,421.5	3,714.2	3,542.9	3,662.1	3,383.4	3,630.3	3,755.7
New York	5,042.1	4,727.2	4,605.2	4,580.6	4,566.9	4,743.8	4,954.5	5,366.1	6,162.3
North Carolina	2,060.3	1,922.3	1,759.2	1,880.5	1,892.0	1,906.2	2,005.4	2,270.1	2,417.4
North Dakota	117.7	88.1	89.5	80.5	82.0	103.6	74.8	110.7	73.0
Ohio	3,554.7	3,436.3	2,425.7	2,454.5	2,638.5	2,497.4	2,549.8	4,206.8	5,188.2
Oklahoma	462.5	449.8	262.4	316.8	450.2	349.0	367.6	480.6	505.9
Oregon	711.1	632.1	529.0	601.5	557.5	543.8	572.5	626.8	696.9
Pennsylvania	4,513.0	3,724.9	3,295.4	3,695.3	3,710.5	3,980.6	3,787.5	4,147.6	4,092.5
Rhode Island	610.1	557.4	486.4	555.3	519.4	627.3	615.0	662.4	722.6
South Carolina	496.7	555.4	397.5	476.4	446.6	460.9	504.7	561.4	646.0
South Dakota	61.1	63.2	56.6	68.8	72.8	69.0	77.2	80.8	88.9
Tennessee	1,898.6	2,111.9	2,118.6	2,023.1	2,312.5	2,479.3	2,491.1	2,564.2	3,578.4
Texas	5,475.4	5,619.7	5,234.2	4,678.4	5,574.5	5,296.5	5,318.9	4,677.3	5,067.5
Utah	1,756.4	972.3	918.6	1,221.8	1,143.6	937.7	1,057.5	1,109.7	1,301.1
Vermont	124.4	103.4	103.0	115.7	81.6	82.4	80.7	97.1	119.9
Virginia	8,287.1	8,130.0	6,487.5	7,651.7	7,487.1	7,383.6	6,310.9	7,187.2	8,028.9
Washington	4,931.4	2,757.4	3,433.5	3,565.3	2,361.7	2,083.8	2,623.7	2,746.0	3,195.3
West Virginia	239.8	263.3	171.4	208.0	239.5	455.5	141.4	280.5	141.9

TABLE 129

Federal obligations for research and development for selected agencies, by state or location: FYs 2011–19

(Dollars in millions)

State or location	2011	2012	2013	2014	2015	2016	2017	2018	2019
Wisconsin	742.2	734.3	654.0	701.1	700.7	722.7	729.5	759.4	839.5
Wyoming	37.2	75.6	41.2	45.8	53.5	43.7	45.8	48.6	67.6
Outlying areas	269.0	193.0	228.6	318.0	347.1	331.1	104.1	496.1	520.7
Puerto Rico	97.4	71.3	82.6	71.0	65.9	71.8	67.6	74.7	81.8
Other areas ^a	171.7	121.6	146.1	247.0	281.3	259.3	36.5	421.4	438.9
Offices abroad ^b	35.7	91.6	165.5	38.0	28.3	3.7	1.8	12.3	4.3
Undistributed ^c	4,373.4	20,468.0	15,210.8	16,728.5	15,624.4	969.2	2,593.9	1,666.5	3,073.1

^a Includes American Samoa, Baker Island, Guam, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Islands, Navassa Island, Northern Mariana Islands, Palmyra Atoll, U.S. Virgin Islands, and Wake Island.

^b Includes R&D performed or administered in foreign countries by the U.S. government.

^c Undistributed totals include Department of Defense (DOD) obligations for which the location of performance is not reported. It includes DOD obligations for industry R&D that were included in individual state totals prior to FY 2012 and obligations for other performers that were not reported prior to FY 2011. The undistributed total for FY 2019 also include Department of Health and Human Services' Biomedical Advanced Research and Development Authority obligations for which the location of performance could not be reported.

Note(s):

Because of rounding, detail may not add to total. Eleven agencies are required to report data for this section of the survey: the Departments of Agriculture, Commerce, Defense, Energy, Health and Human Services, Homeland Security, the Interior, and Transportation; the Environmental Protection Agency; the National Aeronautics and Space Administration; and the National Science Foundation. Obligations of these 11 agencies represented more than 97% of total federal R&D obligations in FY 2019. Although the nongeographic historical tables incorporate corrections to previously reported data that have been submitted by reporting agencies, corresponding corrections to geographic distributions are rarely obtainable. Starting with volume 62 (FYs 2012–14), an "undistributed" category was added to the geographic location tables for DOD obligations for which the location of performance is not reported. It includes DOD obligations for industry R&D that were included in individual state totals prior to FY 2012 and DOD obligations for other performers that were not reported prior to FY 2011. This change was applied retroactively to FY 2011 data. Geographic distribution of DOD development funding to industry reflects location of prime contractors and not the numerous subcontractors who perform much of the R&D. Beginning with FY 2016, the totals reported for development obligations represent a refinement to this category by more narrowly defining it to be "experimental development." Most notably, totals for development do not include the DOD Budget Activity 7 (Operational Systems Development) obligations. Those funds, previously included in DOD's development obligation totals, support the development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year. Therefore, the data are not directly comparable with totals reported in previous years. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 130

Federal obligations for R&D plant for selected agencies, by state or location: FYs 2000–10

(Dollars in millions)

State or location	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All locations	4,489.3	4,026.0	4,289.7	4,239.8	3,979.3	3,749.1	2,093.1	2,111.0	1,893.3	3,591.3	6,563.3
Alabama	210.6	202.6	176.1	92.5	37.3	27.1	6.4	1.4	2.6	4.2	98.1
Alaska	0.3	0.4	281.4	133.9	126.8	15.8	4.8	7.6	3.6	173.5	57.8
Arizona	4.1	2.7	6.7	38.3	27.7	6.7	3.6	62.6	5.7	20.5	194.9
Arkansas	3.2	4.7	13.0	6.0	7.7	0.7	1.7	8.6	6.1	8.9	28.5
California	503.0	570.3	523.9	519.3	987.7	972.4	427.7	404.8	291.0	475.5	1,087.8
Colorado	34.6	54.5	118.3	97.1	82.9	89.3	97.7	183.8	115.9	279.5	300.0
Connecticut	91.0	55.6	51.6	48.7	46.8	87.8	4.3	1.9	5.6	3.1	123.2
Delaware	0.3	0.1	1.0	0.9	0.6	0.4	*	*	0.4	0.5	13.5
District of Columbia	30.0	26.5	52.8	18.7	118.1	33.3	105.8	73.4	76.7	180.4	364.9
Florida	238.3	180.0	196.1	173.0	120.9	107.0	1.6	11.4	12.9	56.7	140.7
Georgia	9.2	20.1	18.0	7.5	16.4	98.7	128.7	131.7	36.0	53.8	58.5
Hawaii	1.8	2.8	6.4	1.9	7.0	43.8	5.6	8.0	3.1	25.3	38.1
Idaho	27.2	18.4	12.7	7.0	22.6	23.1	7.0	8.7	5.9	16.6	25.2
Illinois	143.1	167.2	100.7	122.1	122.9	104.7	84.6	89.2	61.7	233.8	281.3
Indiana	12.2	18.0	11.9	12.3	7.7	4.2	2.7	4.1	3.7	7.5	34.9
Iowa	8.1	16.6	16.3	30.0	107.0	32.0	62.3	64.4	11.3	11.1	28.3
Kansas	3.0	3.0	5.6	1.9	1.3	10.2	0.3	1.6	0.4	2.9	12.7
Kentucky	2.6	0.8	0.9	3.1	7.4	25.2	7.2	0.8	5.6	2.5	21.8
Louisiana	11.7	16.5	35.9	56.8	17.2	15.4	36.7	6.2	2.8	26.7	28.4
Maine	1.5	7.5	8.1	0.9	4.8	3.8	3.8	1.8	0.8	6.3	1.4
Maryland	352.4	107.5	210.3	106.0	472.7	515.1	250.5	157.1	262.1	238.7	1,137.3
Massachusetts	41.6	58.9	24.2	233.4	21.6	90.5	49.1	32.7	13.9	48.8	102.7
Michigan	5.9	17.6	5.1	17.0	8.0	3.3	3.5	2.6	1.3	11.3	45.0
Minnesota	3.7	7.5	8.2	4.2	5.7	4.3	0.8	4.7	0.9	8.5	24.1
Mississippi	20.7	31.0	43.4	24.4	11.0	11.1	20.5	19.4	3.1	25.3	77.6
Missouri	3.1	11.4	5.2	21.2	4.7	11.3	6.3	1.3	1.9	5.8	30.5
Montana	2.4	7.5	8.0	6.5	3.4	6.3	6.5	1.4	0.9	2.0	23.3
Nebraska	3.4	12.2	4.8	0.8	1.5	*	0.7	0.7	1.0	0.9	22.2
Nevada	6.2	14.6	16.5	12.4	7.6	7.2	40.9	32.5	4.3	1.2	1.8
New Hampshire	4.1	2.6	1.3	2.8	6.6	3.4	4.0	1.1	0.8	2.1	11.1
New Jersey	46.4	39.2	29.2	72.5	50.5	51.0	56.9	90.2	53.3	82.8	74.5
New Mexico	122.2	159.7	127.8	187.9	269.4	183.3	110.8	29.2	184.6	108.7	190.5
New York	113.6	138.2	129.2	89.2	71.3	97.1	100.8	80.4	81.7	326.0	309.7
North Carolina	7.7	14.3	8.6	26.2	21.0	8.5	4.1	3.0	4.9	12.2	36.7
North Dakota	1.1	1.5	1.7	0.2	0.0	4.4	0.3	0.0	0.7	2.0	5.9
Ohio	68.7	84.4	56.3	26.4	19.5	26.1	17.0	21.5	16.7	24.3	100.5
Oklahoma	3.5	2.7	4.3	14.4	17.6	4.2	0.9	2.5	12.8	5.7	19.0
Oregon	4.0	16.2	7.3	8.3	7.1	4.0	2.8	4.1	2.9	4.9	35.9
Pennsylvania	63.3	39.9	34.8	79.6	26.8	24.7	17.4	12.9	35.0	37.8	127.1
Rhode Island	2.9	1.3	18.5	0.2	12.0	2.4	1.0	0.1	0.8	4.7	6.1
South Carolina	18.2	6.3	6.7	10.0	8.6	20.7	3.5	7.3	11.4	14.7	24.5
South Dakota	2.2	0.4	3.1	1.1	10.8	2.3	0.5	0.5	0.3	2.2	2.6
Tennessee	128.9	288.3	333.3	309.6	199.7	198.9	111.8	143.6	188.8	330.1	371.6
Texas	2,014.2	1,421.5	1,399.2	1,370.4	568.7	486.8	42.1	7.5	20.6	39.9	430.3
Utah	1.8	3.0	8.4	8.3	1.1	4.3	0.5	3.9	1.9	83.7	12.1
Vermont	2.1	0.3	0.1	0.0	0.6	0.7	0.3	0.2	0.8	0.6	3.2
Virginia	60.6	114.4	99.9	147.3	179.3	170.4	129.0	283.9	268.9	268.6	215.1
Washington	12.1	20.5	18.6	30.6	32.4	34.3	30.0	29.6	13.5	215.2	89.0
West Virginia	18.4	18.6	8.7	6.0	11.3	10.2	20.7	16.0	13.1	52.2	35.7

TABLE 130

Federal obligations for R&D plant for selected agencies, by state or location: FYs 2000–10

(Dollars in millions)

State or location	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Wisconsin	10.5	11.5	23.9	47.7	56.2	58.2	65.1	47.1	30.6	36.9	33.3
Wyoming	0.9	0.3	0.6	0.2	0.3	0.8	0.4	0.6	0.0	0.5	1.2
Outlying areas	5.6	3.7	4.5	1.9	1.6	1.1	0.4	1.6	8.0	3.6	23.3
Puerto Rico	3.2	1.5	4.5	1.9	1.6	1.1	0.4	1.6	4.4	3.6	15.9
Other areas ^a	2.4	2.2	0.0	0.0	0.0	0.0	0.0	0.0	3.6	*	7.4
Offices abroad ^b	0.7	0.6	0.5	1.0	0.0	0.8	1.7	0.0	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50,000.

^a Includes American Samoa, Baker Island, Guam, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Islands, Navassa Island, Northern Mariana Islands, Palmyra Atoll, U.S. Virgin Islands, and Wake Island.^b Includes federal obligations for R&D plant located in foreign countries.**Note(s):**

Because of rounding, detail may not add to total. Eleven agencies are required to report data for this section of the survey: the Departments of Agriculture, Commerce, Defense, Energy, Health and Human Services, Homeland Security, the Interior, and Transportation; the Environmental Protection Agency; the National Aeronautics and Space Administration; and the National Science Foundation. Obligations of these 11 agencies represented more than 98% of federal R&D plant obligations in FY 2019. Although the nongeographic historical tables incorporate corrections to previously reported data that have been submitted by reporting agencies, corresponding corrections to geographic distributions are rarely obtainable. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE 131

Federal obligations for R&D plant for selected agencies, by state or location: FYs 2011–19

(Dollars in millions)

State or location	2011	2012	2013	2014	2015	2016	2017	2018	2019
All locations	4,100.5	2,088.9	1,856.0	2,178.2	2,791.8	2,401.7	2,594.1	3,806.0	4,329.5
Alabama	93.2	3.4	39.3	12.5	14.5	1.6	9.1	127.7	125.3
Alaska	6.3	6.6	7.8	8.1	8.0	9.6	7.1	16.6	6.6
Arizona	30.3	2.9	1.0	29.2	85.9	98.7	61.8	16.3	12.5
Arkansas	6.4	5.9	3.0	5.6	5.2	3.7	4.8	2.6	0.0
California	997.4	117.9	166.2	246.5	307.4	451.4	479.6	656.3	676.5
Colorado	140.6	108.2	150.9	170.4	74.1	112.7	45.7	266.9	365.1
Connecticut	93.7	1.7	1.5	3.1	1.6	1.3	1.6	3.2	1.5
Delaware	0.4	0.8	0.2	1.1	0.1	1.4	0.5	1.9	9.6
District of Columbia	236.9	135.4	167.5	225.1	39.8	49.8	32.5	324.9	150.5
Florida	90.4	47.9	37.6	104.0	29.7	28.7	18.3	80.3	33.8
Georgia	45.4	50.8	92.4	37.3	5.3	11.9	143.9	11.2	6.6
Hawaii	23.3	15.4	13.0	15.2	14.2	14.8	14.8	19.2	24.3
Idaho	30.9	41.0	1.2	2.6	80.9	89.1	116.9	0.0	3.4
Illinois	115.4	245.0	103.4	108.6	126.0	176.9	207.2	383.0	471.3
Indiana	6.6	2.2	2.6	1.4	8.5	8.3	4.1	4.2	8.9
Iowa	7.1	8.0	7.5	3.7	2.5	3.8	4.2	17.6	2.1
Kansas	4.4	5.5	2.5	1.0	815.7	0.8	14.0	10.9	12.2
Kentucky	4.6	8.5	0.8	0.7	1.2	3.2	*	2.3	6.8
Louisiana	14.9	1.2	12.2	1.9	0.7	2.7	17.3	21.1	25.9
Maine	1.5	0.1	1.7	0.8	1.1	0.9	0.9	0.5	0.4
Maryland	404.9	235.3	263.7	202.7	208.3	328.5	258.9	478.5	648.4
Massachusetts	30.8	28.0	13.9	26.8	24.9	29.9	30.4	18.4	39.8
Michigan	3.5	23.8	24.5	59.6	95.7	107.5	103.9	98.9	84.6
Minnesota	24.0	2.1	2.2	3.1	3.1	2.7	1.6	1.1	3.0
Mississippi	22.0	13.6	14.5	14.1	17.6	18.6	16.3	15.4	13.6
Missouri	4.2	7.1	2.9	9.8	5.1	12.2	6.0	5.0	11.1
Montana	0.4	0.0	1.0	0.4	0.8	3.7	0.4	2.8	*
Nebraska	0.8	0.5	0.5	1.2	2.7	0.2	*	0.3	0.8
Nevada	4.1	1.1	0.3	0.6	0.2	0.3	14.0	27.5	1.0
New Hampshire	1.6	2.0	1.3	0.5	0.6	2.0	0.3	2.3	1.3
New Jersey	40.0	52.1	55.5	71.5	44.8	46.2	47.4	49.1	80.8
New Mexico	96.8	54.2	82.9	90.4	86.0	66.3	39.6	87.1	256.8
New York	210.5	186.2	94.1	172.9	204.3	153.8	148.3	98.7	129.7
North Carolina	8.8	10.7	7.4	8.0	6.4	7.7	12.1	8.7	22.9
North Dakota	0.4	0.7	0.0	*	0.2	0.3	0.5	0.7	0.2
Ohio	55.2	61.6	4.7	4.2	7.7	120.9	76.2	82.9	94.5
Oklahoma	13.1	10.6	8.2	7.4	9.8	1.1	3.9	3.2	10.8
Oregon	18.1	9.6	9.6	12.2	14.2	17.6	144.8	103.9	144.4
Pennsylvania	15.2	23.3	13.0	10.4	34.8	24.7	25.5	17.3	12.3
Rhode Island	2.6	6.5	6.2	18.0	19.5	27.8	36.7	19.1	27.7
South Carolina	19.0	16.2	13.2	16.0	16.5	25.8	19.2	20.5	21.8
South Dakota	0.8	0.6	1.1	1.8	0.3	1.1	1.6	0.6	0.3
Tennessee	315.3	248.3	223.4	292.9	264.4	194.7	250.1	430.8	513.1
Texas	428.7	34.8	15.0	9.2	9.3	29.7	33.0	70.6	64.5
Utah	1.5	2.0	3.6	1.4	0.4	0.8	1.0	0.8	0.0
Vermont	1.4	0.5	0.3	1.6	*	0.3	*	1.5	0.8
Virginia	344.7	169.7	131.9	103.9	30.6	82.7	129.7	122.0	103.8
Washington	48.8	52.3	40.8	35.3	37.0	13.2	4.3	36.2	55.9
West Virginia	21.4	14.9	0.2	14.6	14.1	*	1.0	19.8	0.8

TABLE 131

Federal obligations for R&D plant for selected agencies, by state or location: FYs 2011–19

(Dollars in millions)

State or location	2011	2012	2013	2014	2015	2016	2017	2018	2019
Wisconsin	10.0	11.3	5.7	7.2	9.0	8.2	2.0	4.2	12.5
Wyoming	0.5	0.3	1.2	0.7	0.5	0.0	0.0	1.0	10.6
Outlying areas	1.5	0.5	0.6	0.8	0.6	0.7	0.6	9.3	18.3
Puerto Rico	1.5	0.5	0.6	0.8	0.6	0.7	0.6	9.3	15.5
Other areas ^a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9
Offices abroad ^b	0.0	0.0	0.0	0.0	0.4	*	0.6	0.9	0.0
Undistributed ^c	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0

* = amount greater than \$0 but less than \$50,000.

^a Includes American Samoa, Baker Island, Guam, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Islands, Navassa Island, Northern Mariana Islands, Palmyra Atoll, U.S. Virgin Islands, and Wake Island.

^b Includes federal obligations for R&D plant located in foreign countries.

^c Undistributed totals include Department of Defense (DOD) obligations for which the location of performance is not reported. It includes DOD obligations for industry R&D that were included in individual state totals prior to FY 2012 and obligations for other performers that were not reported prior to FY 2011.

Note(s):

Because of rounding, detail may not add to total. Eleven agencies are required to report data for this section of the survey: the Departments of Agriculture, Commerce, Defense, Energy, Health and Human Services, Homeland Security, the Interior, and Transportation; the Environmental Protection Agency; the National Aeronautics and Space Administration; and the National Science Foundation. Obligations of these 11 agencies represented more than 98% of federal R&D plant obligations in FY 2019. Although the nongeographic historical tables incorporate corrections to previously reported data that have been submitted by reporting agencies, corresponding corrections to geographic distributions are rarely obtainable. Starting with volume 62 (FYs 2012–14), an "undistributed" category was added to the geographic location tables for DOD obligations for which the location of performance is not reported. It includes DOD obligations for industry R&D that were included in individual state totals prior to FY 2012 and DOD obligations for other performers that were not reported prior to FY 2011. This change was applied retroactively to FY 2011 data. See [technical table A-2](#) for additional notes associated with the agencies listed in this table.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

Technical Notes

Survey Overview

Purpose. The annual Survey of Federal Funds for Research and Development (Federal Funds Survey) is the primary source of information about federal funding for R&D in the United States. The results of the survey are used to help implement four federal programs: the Federal Laboratory Consortium for Technology Transfer, Small Business Innovation Research, Small Business Technology Transfer, and Established Program to Stimulate Competitive Research.

Data collection authority. The information is solicited under the authority of the National Science Foundation Act of 1950, as amended, and the America COMPETES Reauthorization Act of 2010.

Survey contractor. Synectics for Management Decisions, Inc. (Synectics).

Survey sponsor. The National Center for Science and Engineering Statistics (NCSES) within the National Science Foundation (NSF).

Key Survey Information

Frequency. Annual.

Initial survey year. 1951.

Reference period. FYs 2018–19.

Response unit. Federal agencies.

Sample or census. Census.

Population size. In the survey cycle for data collection on FYs 2019–20, a total of 33 federal agencies reported R&D data. (See section “[Survey Design](#)” for details.)

Sample size. Not applicable; the survey is a census of all federal agencies that conduct R&D programs, excluding the Central Intelligence Agency (CIA).

Survey Design

Target population. The Federal Funds Survey target population consists of the federal agencies that conduct R&D programs, excluding the CIA. For the FYs 2019–20 cycle, 33 federal agencies (15 federal departments and 18 independent agencies) reported R&D data. Because multiple subdivisions of some federal departments completed the survey, there were 83 agency-level respondents: 5 federal departments, 60 agencies within another 10 federal departments, and 18 independent agencies. (Note: The Department of Treasury’s Internal Revenue Service [IRS] reported no funds.) However, lower offices could also be authorized to enter data: in Federal Funds Survey nomenclature, agency-level offices could authorize program offices, program offices could authorize field offices, and field offices could authorize branch offices. When these sub-offices are included, there were 699 total respondents: 83 agencies, 169 program offices, 81 field offices, and 366 branch offices.

Sampling frame. The survey is a census of all federal agencies that conduct R&D programs, which are identified from information in the president’s budget submitted to Congress. The Analytical Perspectives volume and the “Detailed Budget Estimates by Agency” section of the appendix to the president’s budget identify agencies that receive R&D funding.

Sample design. Not applicable.

Data Collection and Processing Methods

Data collection. Data for FYs 2019–20 (volume 69) were collected by Synectics under contract to NCSES. Data collection began with an e-mail to each agency to verify the name, address, fax and phone numbers, and e-mail address of each agency-level survey respondent. A Web-based data collection system is used to collect the Federal Funds Survey data.

The Web-based data collection system is part of NCSES's effort to enhance survey reporting and reduce data collection and processing costs by offering respondents direct online reporting and editing; however, some agencies submit their data in alternative formats.

Volume 69 continued the procedure established in volume 66 to collect information for 2 instead of 3 federal government fiscal years: the fiscal year just completed (FY 2019—i.e., 1 October 2018 through 30 September 2019) and the current fiscal year (FY 2020). FY 2019 data are completed transactions. FY 2020 data are estimates of congressional appropriation actions and apportionment and reprogramming decisions. After consultation with data users, it was determined that the budget year projections for obligations based on the president's budget request to Congress were not as useful as the budget authority data presented in the budget request, so data were not requested for the president's budget year.

Data collection began on 19 February 2020, and the requested due date for data submissions was 1 May 2020. Data collection was extended until all surveyed agencies provided complete and final survey data.

Mode. The Federal Funds Survey uses a Web-based data collection system. The Web-based system consists of a data collection component that allows survey respondents to enter their data online and a monitoring component that allows the data collection contractor to monitor support requests, data entry, and data issues. The Web-based system's two components are password protected, so that only authorized respondents and staff can access them. All data imports and trend checking are accomplished using the Web-based system.

Response rate. 100%.

Data checking. Data errors in the Federal Funds Survey are flagged automatically by the Web-based data collection system: respondents cannot submit their data to NCSES until all required fields have been completed without errors. Once data are submitted, each agency's narrative statement, 2-year difference report, and \$100-million difference report are reviewed. Respondents are contacted to resolve potential reporting errors that cannot be reconciled by the narratives. Explanations of questionable data are noted.

Imputation. None.

Weighting. None.

Variance estimation. Not applicable.

Survey Quality Measures

Sampling error. Not applicable.

Coverage error. Given the existence of a complete list of all eligible agencies, there is no known coverage error. The CIA is purposefully excluded.

Nonresponse error. Agencies are encouraged to estimate when actual data are unavailable. The survey instrument allows respondents to enter data or skip data fields. There are several possible sources of nonresponse error by respondents, including inadvertently skipping data fields, skipping data fields under the false assumption that blank fields are equivalent to zero, and skipping data fields when data are unavailable.

Measurement error. Some measurement problems are known to exist in the Federal Funds Survey data. Some agencies cannot report the full costs of R&D, the ultimate performer of R&D, or R&D plant data.

For example, the Department of Defense (DOD) does not include headquarters costs of planning and administering R&D programs, which are estimated at a fraction of 1% of its total cost. DOD has stated that identification of amounts at this level is impracticable.

The National Institutes of Health (NIH) in the Department of Health and Human Services (HHS) currently has many of its awards in its financial system without any field of science code. Therefore, NIH uses an alternate source to estimate its research dollars by field of science. NIH uses scientific class codes (based upon history of grant, content of the title, and the name of the awarding institute or center) as an approximation for field of science codes.

The National Aeronautics and Space Administration (NASA) does not include any field of science codes in its financial database. Consequently, NASA must estimate what percentage of the agency's research dollars are allocated into the fields of science.

Also, agencies are required to report the ultimate performer of R&D. However, through past workshops, NCSES has learned that some agencies do not always track their R&D dollars to the ultimate performer of R&D. This leads to some degree of misclassification of performers of R&D, but NCSES has not determined the extent of the errors in performer misclassification by the reporting agencies.

Eleven agencies are required to report R&D obligations by state and performer (the Departments of Agriculture, Commerce, Defense, Energy, Health and Human Services, Homeland Security, the Interior, and Transportation; the Environmental Protection Agency; NASA; and NSF). Obligations of these 11 agencies represent the majority of total federal R&D obligations (98% for FYs 2008–19), but there is some underreporting by state, which may affect states unevenly. In addition, geographic distribution of DOD development funding to industry reflects the location of prime contractors and not the numerous subcontractors who perform much of the R&D. DOD development funding to industry represented 48.0% of total federal obligations for development in FY 2019 (\$29.4 billion out of \$61.3 billion).

R&D plant data are underreported to some extent because of the difficulty some agencies, particularly DOD and NASA, encounter in identifying and reporting these data. DOD's respondents report obligations for R&D plant that are funded under the agency's appropriation for construction, but they are able to identify only a small portion of the R&D plant support that is within R&D contracts funded from DOD's appropriation for research, development, testing, and evaluation. Similarly, NASA respondents cannot separately identify the portions of industrial R&D contracts that apply to R&D plant, since these data are subsumed in the R&D data covering industrial performance. NASA R&D plant data for other performing sectors are reported separately.

Data Comparability (Changes)

Data revisions. When completing the current year's survey, agencies naturally revise their estimates for the last year of the previous report—in this case, FY 2019. Sometimes, survey submissions also reflect reappraisals and revisions in classification of various aspects of agencies' R&D programs; in those instances, NCSES requests that agencies provide revised prior-year data to maintain consistency and comparability with the most recent R&D concepts.

For trend comparisons, use the historical data from only the most recent publication, which incorporates changes agencies have made in prior-year data to reflect program reclassifications or other corrections. Do not use data published earlier.

Changes in survey coverage and population. This cycle (volume 69, FYs 2019–20), one new agency was added as a respondent, the Biomedical Advanced Research and Development Authority; one agency resumed reporting, the U.S. Agency for Global Media (formerly the Broadcasting Board of Governors); and one agency was removed, the Pension Benefit Guaranty Corporation.

Changes in questionnaire.

- In volumes 68 (FYs 2018–19) and 69 (FYs 2019–20), the survey Table 6A, which collects information on federal intramural R&D obligations, was deactivated and agencies were instructed not to complete it.
- Starting with volume 66 (FYs 2016–17), the survey collects 2 federal government fiscal years—actual data for the fiscal year just completed and estimates for the current fiscal year. Previously, the survey also collected projected obligations for the next fiscal year based on the president’s budget request to Congress. For volume 66, data were collected for only 2 fiscal years due to the delayed FY 2018 budget formulation process. However, after consultation with data users, NCSSES determined that the projections were not as useful as the budget authority data presented in the budget request.
- In volume 66, the survey table numbering was changed from Roman numerals I–XI and, for selected agencies, the letters A–E, to Arabic numerals 1–16. The order of tables remained the same.
- In the volume 66 DOD-version of the questionnaire, the definition of major systems development was changed to represent DOD Budget Activities 4 through 6 instead of Budget Activities 4 through 7, and questions relating to funding for Operational Systems Development (Budget Activity 7) were added to the instrument. The [Table 6](#) and [Table 11](#) narrative tables were removed from the DOD-version of the questionnaire.
- In volumes 59 (FYs 2009–11) and 60 (FYs 2010–12), questions relating to funding from the American Recovery and Reinvestment Act of 2009 (ARRA) were added to the data collection instruments. The survey collected separate outlays and obligations for ARRA and non-ARRA sources of funding, by performer and geography for FYs 2009 and 2010.
- Starting with volume 59 (FYs 2009–11), federal funding data were requested in actual dollars (instead of rounded in thousands, as was done through volume 58).

Changes in reporting procedures or classification.

- FY 2019. For volume 69 (FYs 2019–20), FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).
- FY 2019. The Biomedical Advanced Research and Development Authority began reporting. For volume 69 (FYs 2019–20), it could not submit any geographical data, so its data were reported as undistributed on the state tables.
- FY 2019. The U.S. Agency for Global Media (formerly the Broadcasting Board of Governors), which did not report data between FY 2008 and FY 2018, resumed reporting.
- FY 2018. The HHS Centers for Medicare and Medicaid (CMS) funding was reported by the CMS Office of Financial Management at an agency-wide level instead of by the CMS Center for Medicare and Medicaid Innovation (CMMI) and its R&D group, the Office of Research, Development, and Information (ORDI), which used to report at a component level.
- FY 2018. The Department of State added the Global Health Programs R&D funding.
- FY 2018. The Department of Veterans Affairs added funds for the Medical Services support to the existing R&D funding to fully report the total cost of intramural R&D. Although the Medical Services do not directly fund specific R&D activities, they host intramural research programs that were not previously reported.
- FY 2018. The Department of Homeland Security’s (DHS’s) Countering Weapons of Mass Destruction (CWMD) Office was established on 7 December 2017. CWMD consolidated primarily the Domestic Nuclear Detection Office (DNDO) and a majority of the Office of Health Affairs, as well as other DHS elements. Prior to FY 2018, data reported for the CWMD would have been under the DNDO.
- FY 2018. The Department of Energy (DOE) revised its FYs 2016 and 2017 data after discovering its Office of Fossil Energy reported “in thousands” instead of actual dollars for volumes 66 (FYs 2016–17) and 67 (FYs 2017–18).

- FY 2018. The Department of Agriculture's (USDA's) Economic Research Service (ERS) partially revised its FYs 2009 and 2010 data during the volume 61 (FYs 2011–13) cycle. NCSSES discovered a discrepancy that was corrected during the volume 68 cycle, completing the revision.
- FY 2018. DHS's Transportation Security Administration, which did not report data between FY 2010 and FY 2017, resumed reporting for volume 68 (FYs 2018–19).
- FY 2018. DHS's U.S. Secret Service, which did not report data between FY 2009 and FY 2017, resumed reporting for volume 68 (FYs 2018–19).
- FY 2018. NCSSES discovered that in some past volumes the obligations reported for basic research in certain foreign countries were greater than the corresponding obligations reported for R&D; the following data were corrected as a result: DOD and Chemical and Biological Defense FY 2003 data, Defense agencies and activities FY 2003 and FY 2011 data, Department of the Air Force FY 2009 data, and Department of the Navy FY 2005, FY 2011, and FY 2013 data; DOE and Office of Science FY 2009 data; HHS and Centers for Disease Control and Prevention (CDC) FY 2008 and FY 2017 data; and NSF FY 2001 data. NCSSES also discovered that some obligations reported for academic performers were greater than the corresponding obligations reported for total performers, and DOD and Department of the Air Force FY 2009 data, DOE and Fossil Energy FY 1999 data, and NASA FY 2008 data were corrected. Finally, NCSSES discovered a problem with FY 2017 HHS CDC personnel costs data, which were then also corrected.
- FY 2017. The Department of the Treasury's IRS performed a detailed evaluation and assessment of its programs and determined that none of its functions can be defined as R&D activity as defined in Office of Management and Budget (OMB) Circular A-11. The review included discussions with program owners and relevant contractors who perform work on behalf of the IRS. The IRS also provided a negative response to the OMB data call on R&D under Circular A-11 for the same reference period (FYs 2017–18). Despite no longer having any R&D obligations, the IRS still sponsors a Federally Funded Research and Development Center, the Center for Enterprise Modernization.
- FY 2017. NASA estimated that the revised OMB definition for "experimental development" reduced its reported R&D total by about \$2.7 billion in FY 2017 and \$2.9 billion in FY 2018 from what would have been reported under the previous definition prior to volume 66 (FYs 2016–17).
- FY 2017. The Patient-Centered Outcomes Research Trust Fund (PCORTF) was established by Congress through the Patient Protection and Affordable Care Act of 2010, signed by the president on 23 March 2010. PCORTF began reporting for volume 67 (FYs 2017–18), but it also submitted data for FYs 2011–16.
- FY 2017. The Tennessee Valley Authority, which did not report data between FY 1999 and FY 2016, resumed reporting for volume 67 (FYs 2017–18).
- FY 2017. The U.S. Postal Service, which did not report data between FY 1999 and FY 2016, resumed reporting for volume 67 (FYs 2017–18) and submitted data for FYs 2015–16.
- FY 2017. During the volume 67 (FYs 2017–18) data collection, DHS's Science and Technology Directorate revised its FY 2016 data.
- FY 2016. The Administrative Office of the U.S. Courts began reporting as of volume 66 (FYs 2016–17).
- Beginning with FY 2016, the totals reported for development obligations and outlays represent a refinement to this category by more narrowly defining it to be "experimental development." Most notably, totals for development do not include the DOD Budget Activity 7 (Operational System Development) obligations and outlays. Those funds, previously included in DOD's development totals, support the development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year. Therefore, the data are not directly comparable with totals reported in previous years.
- Prior to the volume 66 launch, the definitions of basic research, applied research, experimental development, R&D, and R&D plant were revised to match the definitions used by the OMB in the July 2016 version of Circular A-11, Section 84 (Schedule C).

- FYs 2016–17. Before the volume 66 survey cycle, NSF updated the list of foreign performers in the Federal Funds Survey to match the list of countries and territories in the Department of State’s Bureau of Intelligence and Research fact sheet of Independent States in the World and fact sheet of Dependencies and Areas of Special Sovereignty. Country lists in volume 66 data tables and later may differ from those in previous reports.
- FY 2015. The HHS Administration for Community Living (ACL) began reporting in FY 2015, replacing the Administration on Aging, which was transferred to ACL when ACL was established on 18 April 2012. Several programs that serve older adults and people with disabilities were transferred from other agencies to ACL, including a number of programs from the Department of Education due to the 2014 Workforce Innovation and Opportunities Act.
- FY 2015. The Department of the Interior’s Bureau of Land Management and U.S. Fish and Wildlife Service, which did not report data between FY 1999 and FY 2014, resumed reporting.
- In January 2014, all Research and Innovative Technology Administration programs were transferred into the Office of the Assistant Secretary for Research and Technology in the Office of the Secretary of Transportation.
- FY 2014. DHS’s Domestic Nuclear Detection Office began reporting for FY 2014.
- FY 2014. The Department of State data for FY 2014 were excluded due to their poor quality.
- FY 2013. NASA revamped its reporting process so that the data for FY 2012 forward are not directly comparable with totals reported in previous years.
- FY 2012. NASA began reporting International Space Station (ISS) obligations as research rather than R&D plant.
- Starting with volume 62 (FYs 2012–14), an “undistributed” category was added to the geographic location tables for DOD obligations for which the location of performance is not reported. It includes DOD obligations for industry R&D that were included in individual state totals prior to FY 2012 and DOD obligations for other performers that were not reported prior to FY 2011. This change was applied retroactively to FY 2011 data.
- Starting with volume 61 (FYs 2011–13), DOD subagencies other than the Defense Advanced Research Projects Agency were reported as an aggregate total under other defense agencies to enable complete reporting of DOD R&D (both unclassified and classified). Consequently, DOD began reporting additional classified R&D not previously reported by its subagencies.
- FY 2011. USDA’s ERS partially revised its data for FYs 2009 and 2010 data during the volume 61 (FYs 2011–13) cycle.
- FY 2010. NASA resumed reporting ISS obligations as R&D plant.
- FYs 2000–09. Beginning in FY 2000, the Department of the Air Force (AF) did not report Budget Activity (BA) 6.7 Operational Systems Development data because the agency misunderstood the reporting requirements. During the volume 57 data collection cycle, AF edited prior-year data for FYs 2000–07 to include BA 6.7 Operational Systems Development data. These data revisions were derived from FY 2007 distribution percentages that were then applied backward to revise data for FYs 2000–06.
- FYs 2006–07. NASA’s R&D obligations decreased by \$1 billion. Of this amount, \$850 million was accounted for by obligations for operational projects that NASA excluded in FY 2007 but reported in FY 2006. The remainder was from an overall decrease in obligations between FYs 2006 and 2007.
- FY 2006. NASA reclassified funding for the following items as operational costs: Space Operations, the Hubble Space Telescope, the Stratospheric Observatory for Infrared Astronomy, and the James Webb Space Telescope. This funding was previously reported as R&D plant.
- FYs 2005–07. Before the volume 55 survey cycle, NSF updated the list of foreign performers in the Federal Funds Survey to match the list of countries and territories in the Department of State’s Bureau of Intelligence and Research fact sheet of Independent States in the World and fact sheet of Dependencies and Areas of Special Sovereignty. Area and country lists in volume 55 data tables and later may differ from those in previous reports.

- FYs 2004–06. NASA implemented a full-cost budget approach, which includes all of the direct and indirect costs for procurement, personnel, travel, and other infrastructure-related expenses relative to a particular program and project. NASA's data for FY 2004 and later years may not be directly comparable with its data for FY 2003 and earlier years.
- FY 2004. NIH revised its financial database; beginning with FY 2004, NIH records no longer contain information on the field of science and engineering. Data for FY 2004 and later years are not directly comparable with data for FY 2003 and earlier years.
- Data for FYs 2003–06 from the Substance Abuse and Mental Health Services Administration (SAMHSA) are estimates based on SAMHSA's obligations by program activity budget and previously reported funding for development.
- FY 2003. SAMHSA reclassified some of its funding categories as non-R&D that had been considered R&D in prior years.
- On 25 November 2002, the president signed the Homeland Security Act of 2002, establishing the Department of Homeland Security (DHS). DHS includes the R&D activities previously reported by the Federal Emergency Management Agency, the Science and Technology Directorate, the Transportation Security Administration, the U.S. Coast Guard, and the U.S. Secret Service.
- FY 2000. NASA reclassified the ISS as a physical asset, reclassified ISS Research as equipment, and transferred funding for the program from R&D to R&D plant.
- FY 2000. NIH reclassified as research the activities that it had previously classified as development. NIH data for FY 2000 forward reflect this change. For more information on the classification changes at NASA and NIH, refer to *Classification Revisions Reduce Reported Federal Development Obligations* (InfoBrief NSF 02-309), February 2002, available at <https://www.nsf.gov/statistics/nsf02309>.
- FYs 1996–98. The lines on the survey instrument for the special foreign currency program and for detailed field of science and engineering (S&E) were eliminated beginning with the volume 46 survey cycle. Two tables depicting data on foreign performers by region, country, and agency that were removed before publication of volume 43 were reinstated with volume 46.
- FYs 1994–96. During the volume 44 survey cycle, the Director for Defense Research and Engineering (DDR&E) at DOD requested that NSF further clarify the true character of DOD's R&D program, particularly as it compares with other federal agencies, by adding more detail to development obligations reported by DOD respondents. Specifically, DOD requested that NSF allow DOD agencies to report development obligations in two separate categories: advanced technology development and major systems development.

An excerpt from a letter written by Robert V. Tuohy, Chief, Program Analysis and Integration at DDR&E, to John E. Jankowski, Program Director, Research and Development Statistics Program, Division of Science Resources Statistics, NSF, explains the reasoning behind the DDR&E request:

"The DOD's R&D program is divided into two major pieces, Science and Technology (S&T) and Major Systems Development. The other federal agencies' entire R&D programs are equivalent in nature to DOD's S&T program, with the exception of the Department of Energy and possibly NASA. Comparing those other agency programs to DOD's program, including the development of weapons systems such as F-22 Fighter and the New Attack Submarine, is misleading."

- FYs 1990–92. Since volume 40, DOD has reported research obligations and development obligations separately. Tables reporting obligations for research, by state and performer, and obligations for development, by state and performer, were specifically created for DOD. Circumstances specific to DOD are (1) DOD funds the preponderance of federal development and (2) DOD development funded at institutions of higher education is typically performed at university-affiliated nonacademic laboratories, which are separate from universities' academic departments, where university research is typically performed.

Definitions

Agency and subdivision. An agency is an organization of the federal government whose principal executive officer reports to the president. The Library of Congress and the Administrative Office of the U.S. Courts are also included in the survey, even though the chief officer of the Library of Congress reports to Congress and the U.S. Courts are part of the judicial branch. Subdivision refers to any organizational unit of a reporting agency, such as a bureau, division, office, or service.

Development. See R&D and R&D plant.

Fields of science and engineering. The Federal Funds Survey uses eight broad field categories, each comprising a number of detailed fields. A discipline under one detailed field may be classified under another detailed field when the major emphasis is elsewhere. Research in biochemistry, for example, might be reported as biological, agricultural, or medical, depending on the focus of the project. No double counting is intended or allowed. The fields are as follows:

- *Computer sciences and mathematics* employs logical reasoning with the aid of symbols and is concerned with the development of methods of operation using such symbols or with the application of such methods to automated information systems. Detailed fields: computer sciences, mathematics, and other computer sciences and mathematics.
- *Engineering* is concerned with developing engineering principles or making specific principles usable in engineering practice. Detailed fields: aeronautical, astronautical, chemical, civil, electrical, mechanical, metallurgy and materials engineering, and other engineering.
- *Environmental sciences* (terrestrial and extraterrestrial) is, with the exception of oceanography, concerned with the gross nonbiological properties of the areas of the solar system that directly or indirectly affect human survival and welfare. Obligations for studies pertaining to life in the sea or other bodies of water are reported as support of oceanography, not biology. Detailed fields: atmospheric sciences, geological sciences, oceanography, and other environmental sciences.
- *Life sciences* is concerned with the scientific study of living organisms and their systems. Detailed fields: agricultural sciences, biological sciences (excluding environmental biology), environmental biology, medical sciences, and other life sciences.
- *Physical sciences* is concerned with understanding of the material universe and its phenomena. Detailed fields: astronomy, chemistry, physics, and other physical sciences.
- *Psychology* deals with behavior, mental processes, and individual and group characteristics and abilities. Detailed fields: biological aspects, social aspects, and other psychological sciences.
- *Social sciences* is concerned with an understanding of the behavior of social institutions and groups and of individuals as members of a group. Detailed fields: anthropology, economics, political science, sociology, and other social sciences.
- *Other sciences not elsewhere classified (nec)* is used for multidisciplinary or interdisciplinary projects that cannot be classified within one of the broad fields of science already listed.

Federal obligations for research performed at universities and colleges, by detailed field of science and engineering.

Seven agencies respond to this part of the survey: the Departments of Agriculture, Defense, Energy, Health and Human Services, and Homeland Security; NASA; and NSF.

Geographic distribution of R&D obligations. The 11 largest R&D funding agencies respond to this portion of the survey: the Departments of Agriculture, Commerce, Defense, Energy, Health and Human Services, Homeland Security, the Interior, and Transportation; the Environmental Protection Agency; NASA; and NSF. They are asked to provide the principal location (state or outlying area) of the work performed by the primary contractor, grantee, or intramural organization, assign the obligations to the location of the headquarters of the U.S. primary contractor, grantee, or intramural organization, or list the funds as undistributed.

Obligations and outlays. Obligations represent the amounts for orders placed, contracts awarded, services received, and similar transactions during a given period, regardless of when funds were appropriated and when future payment of money is required. Outlays represent the amounts for checks issued and cash payments made during a given period, regardless of when funds were appropriated.

Performer. An intramural group or organization carrying out an operational function or an extramural organization or a person receiving support or providing services under a contract or grant.

- *Intramural performers* are agencies of the federal government, including federal employees who work on R&D both onsite and offsite. The work of these agencies is carried out directly by agency personnel. Obligations reported under this category are for activities performed or to be performed by the reporting agency itself or are for funds that the agency transfers to another federal agency for performance of work, as long as the ultimate performer is that agency or any federal agency. If the ultimate performer is not a federal agency, funds transferred are reported by the transferring agency under the appropriate extramural performer category (businesses, universities and colleges, other nonprofit institutions, FFRDCs, nonfederal government, and foreign).

Intramural activities cover not only actual intramural R&D performance but also the costs associated with administration of intramural R&D programs and extramural R&D procurements by federal personnel. Intramural activities also include the costs of supplies and off-the-shelf equipment (equipment that has gone beyond the development or prototype stage) procured for use in intramural R&D. For example, an operational launch vehicle purchased from an extramural source by NASA and used for intramural performance of R&D is reported as a part of the cost of intramural R&D.

- *Extramural performers* are organizations outside the federal sector that perform R&D with federal funds under contract, grant, or cooperative agreement. Only costs associated with actual R&D performance are reported. Types of extramural performers:
 - *Businesses or Industrial firms*—Organizations that may legally distribute net earnings to individuals or to other organizations.
 - *Universities and colleges*—Institutions of higher education in the United States that engage primarily in providing resident or accredited instruction for a not less than a 2-year program above the secondary school level that is acceptable for full credit toward a bachelor's degree or that provide not less than a 1-year program of training above the secondary school level that prepares students for gainful employment in a recognized occupation. Included are colleges of liberal arts; schools of arts and sciences; professional schools, as in engineering and medicine, including affiliated hospitals and associated research institutes; and agricultural experiment stations. Other examples of universities and colleges include community colleges, 4-year colleges, universities, and freestanding professional schools (medical schools, law schools, etc.).
 - *Other nonprofit institutions*—Private organizations other than educational institutions whose net earnings do not benefit either private stockholders or individuals and other private organizations organized for the exclusive purpose of turning over their entire net earnings to such nonprofit organizations. Examples of nonprofit institutions include foundations, trade associations, charities, and research organizations.

- *Federally funded research and development centers (FFRDCs)*—R&D-performing organizations that are exclusively or substantially financed by the federal government and are supported by the federal government either to meet a particular R&D objective or in some instances to provide major facilities at universities for research and associated training purposes. Each center is administered by an industrial firm, a university, or another nonprofit institution (see <https://www.nsf.gov/statistics/ffrdclist/> for the Master Government List of FFRDCs maintained by NSF).
- *State and local governments*—State and local government agencies, excluding state or local universities and colleges, agricultural experiment stations, medical schools, and affiliated hospitals. (Federal R&D funds obligated directly to such state and local institutions are excluded in this category. However, they are included under the universities and colleges category in this report.) R&D activities under the state and local governments category are performed either by the state or local agencies themselves or by other organizations under grants or contracts from such agencies. Regardless of the ultimate performer, federal R&D funds directed to state and local governments are reported only under this sector.
- *Foreign performers*—Other nations' citizens, organizations, universities and colleges, governments, as well as international organizations located outside the United States, that perform R&D. In most cases, foreigners performing R&D in the United States are not reported here. Excluded from this category are U.S. agencies, U.S. organizations, or U.S. citizens performing R&D abroad for the federal government. Examples of foreign performers include the North Atlantic Treaty Organization (NATO), the United Nations Educational, Scientific, and Cultural Organization (UNESCO), and the World Health Organization (WHO). An exception in the past was made in the case of U.S. citizens performing R&D abroad under special foreign-currency funds; these activities were included under the foreign performers category but have not been collected since the mid-1990s.
- *Private individuals*—When an R&D grant or contract is awarded directly to a private individual, obligations incurred are placed under the category industrial firms.

R&D and R&D plant. Amounts for R&D and R&D plant include all direct, incidental, or related costs resulting from, or necessary to, performance of R&D and costs of R&D plant as defined below, regardless of whether R&D is performed by a federal agency (intramurally) or by private individuals and organizations under grant or contract (extramurally). R&D excludes routine product testing, quality control, mapping and surveys, collection of general-purpose statistics, experimental production, and the training of scientific personnel.

- *Research* is defined as systematic study directed toward fuller scientific knowledge or understanding of the subject studied. Research is classified as either basic or applied, according to the objectives of the sponsoring agency.
- *Basic research* is defined as experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundations of phenomena and observable facts. Basic research may include activities with broad or general applications in mind, such as the study of how plant genomes change, but should exclude research directed towards a specific application or requirement, such as the optimization of the genome of a specific crop species.
- *Applied research* is defined as original investigation undertaken in order to acquire new knowledge. Applied research is, however, directed primarily towards a specific practical aim or objective.
- *Development*, also known as experimental development, is defined as creative and systematic work, drawing on knowledge gained from research and practical experience, which is directed at producing new products or processes or improving existing products or processes. Like research, experimental development will result in gaining additional knowledge.

For reporting experimental development activities, the following are included:

The production of materials, devices, and systems or methods, including the design, construction, and testing of experimental prototypes.

Technology demonstrations, in cases where a system or component is being demonstrated at scale for the first time, and it is realistic to expect additional refinements to the design (feedback R&D) following the demonstration. However, not all activities that are identified as “technology demonstrations” are R&D.

However, experimental development excludes the following:

User demonstrations where the cost and benefits of a system are being validated for a specific use case. This includes low-rate initial production activities.

Pre-production development, which is defined as non-experimental work on a product or system before it goes into full production, including activities such as tooling and development of production facilities.

To better differentiate between the part of the federal R&D budget that supports science and key enabling technologies (including technologies for military and nondefense applications) and the part that primarily supports testing and evaluation (mostly of defense-related systems), NSF collects development dollars from DOD in two categories: advanced technology development and major systems development.

DOD uses Research, Development, Test, and Evaluation (RDT&E) Budget Activities 1–7 to classify data into the survey categories. Within DOD’s research categories, basic research is classified as Budget Activity 1, and applied research is classified as Budget Activity 2. Within DOD’s development categories, advanced technology development is classified as Budget Activity 3. Starting in volume 66, major systems development is classified as Budget Activities 4–6 instead of Budget Activities 4–7 and includes advanced component development and prototypes, system development and demonstration, and RDT&E management support; data on Budget Activity 7, operational systems development, is collected separately. (Note: As a historical artifact from previous DOD budget authority terminology, funds for Budget Activity categories 1 through 7 are sometimes referred to as 6.1 through 6.7 monies.)

- *Demonstration* includes amounts for activities that are part of R&D (i.e., that are intended to prove or to test whether a technology or method does in fact work). Demonstrations intended primarily to make information available about new technologies or methods are excluded.
- *R&D plant* is defined as spending on both R&D facilities and major equipment as defined in OMB Circular A-11 Section 84 (Schedule C) and includes physical assets, such as land, structures, equipment, and intellectual property (e.g., software or applications) that have an estimated useful life of 2 years or more. Reporting for R&D plant includes the purchase, construction, manufacture, rehabilitation, or major improvement of physical assets regardless of whether the assets are owned or operated by the federal government, states, municipalities, or private individuals. The cost of the asset includes both its purchase price and all other costs incurred to bring it to a form and location suitable for use.
- For reporting construction of R&D facilities and major moveable R&D equipment, include the following:

Construction of facilities that are necessary for the execution of an R&D program. This may include land, major fixed equipment, and supporting infrastructure such as a sewer line, or housing at a remote location. Many laboratory buildings will include a mixture of R&D facilities and office space. The fraction of the building that is considered to be R&D may be calculated based on the percentage of square footage that is used for R&D.

Acquisition, design, or production of major moveable equipment, such as mass spectrometers, research vessels, DNA sequencers, and other moveable major instrumentation for use in R&D activities.

Programs of \$1 million or more that are devoted to the purchase or construction of R&D major equipment.

Exclude the following:

Construction of other non-R&D facilities.

Minor equipment purchases, such as personal computers, standard microscopes, and simple spectrometers (report these costs under total R&D, not R&D Plant).

Obligations for foreign R&D plant are limited to federal funds for facilities that are located abroad and used in support of foreign R&D.

Technical Tables

Table	Title
A-1	Agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–69
A-2	Notes associated with agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–69

Agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–69

[illegible]

Agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–69

[illegible]

Agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–69[illegible]

TABLE A-1

Agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–69

(Agency key)

[illegible]

Agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–69

Agency	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69				
DT&E Support From Operations and Maintenance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	T	T	T	T	T	T	T	T	T	T	T	T	T		
DT&E Support From Procurement Appropriations	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
Housing for Military Personnel in R&D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
Military Construction	X	X	X	X	X	X	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
Pay and Allowances of Military Personnel in R&D	X	X	X	X	X	X	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
RDT&E Appropriation	X	X	X	X	X	X	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
Special Foreign Currency Program	X	X	X	X	X	X	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
Health Affairs, Assistant Secretary of Defense for	N	N	N	N	N	N	N	N	N	N	N	N	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
Operational Test and Evaluation, Director	N	N	N	N	N	N	N	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	T	T	T	T	T	T	T	T	T	T	T	T
Test and Evaluation, Deputy Under Secretary of Defense	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Department of Education	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Department of Energy	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Advanced Research Projects Agency-Energy (formerly Energy Transformation Acceleration Fund)	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Bonneville Power Administration	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O		
Civilian Radioactive Waste Management	N	N	N	N	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	X	X	X	X	X	X	X	X	X	N	N	N	N	N	N	N	N	N	N	N	N	
Electricity Delivery and Energy Reliability	N	N	N																																										

Agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–69

[illegible]

Agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–69

[illegible]

Agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–69

[illegible]

Agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–69

Agency	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69			
Bureau of Sport Fisheries and Wildlife	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
U.S. Geological Survey	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Department of Justice	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
Bureau of Prisons	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Drug Enforcement Administration	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	T	T	T	T	T	T	T	T	T	T	T	T	T	T
Federal Bureau of Investigation	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Immigration and Naturalization Service	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Office of Justice Programs	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Office of Legal Policy	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	T	T	T	T	T	T	T	T	T	T	T	T	T	T
Department of Labor	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
Bureau of Apprenticeship and Training	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Bureau of Employment Security	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Bureau of Labor Statistics	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	T	T	T	T	T	T	T	T	T	T	T	T
Employee Benefits Security Administration	N	N	N	N	N	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Employment and Training Administration	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	T	T	T	T	T	T	T	T	T	T	T	T
Employment Standards Administration	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	T	N	N	N	N	N	N	N	N	N	N	N	N	N
Labor-Management Relations and Cooperative Programs	N	N	N	N	N	X	X	X	X	X	X	N																																

Agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–69

[illegible]

Agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–69

Agency	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69				
Bureau of Engraving and Printing	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Financial Crimes Enforcement Network	N	N	N	N	N	N	N	N	N	N	N	N	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
Internal Revenue Service	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Office of Thrift Supervision	N	N	N	N	N	N	N	N	N	N	N	O	X	X	X	X	X	X	X	X	X	X	X	X	Z	Z	Z	Z	Z	T	T	T	N	N	N	N	N	N	N	N	N	N	N	N	N
U.S. Customs Service	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
U.S. Mint	O	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
U.S. Secret Service	N	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Department of Veterans Affairs	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Other agencies																																													
ACTION	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Administrative Office of the U.S. Courts	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
Advisory Commission on Intergovernmental Relations	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Agency for International Development	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Appalachian Regional Commission	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Atomic Energy Commission	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Civil Aeronautics Board	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Civil Service Commission	N	N	N																																										

Agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–69

[illegible]

TABLE A-1

Agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–69

(Agency key)

Agency	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69		
Patient-Centered Outcomes Research Trust Fund	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	X	X	X	X	X	X	X	X	X	X
Small Business Administration	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	T	T	T	T	T	T	T	T	T	T	T	T	T	
Smithsonian Institution	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Social Security Administration	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Special Action Office for Drug Abuse Prevention	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
Tennessee Valley Authority	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	T	T	T	T	T	T	T	T	T	X	X	X	X	
U.S. Agency for Global Media (formerly Broadcasting Board of Governors)	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	X	X	X	X	X	X	X	O	T	T	T	T	T	T	T	T	T	T	T	X		
U.S. Arms Control and Disarmament Agency	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
U.S. Commission on Civil Rights	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	T	T	T	T	T	T	T	T	T	T	T	T	T	
U.S. Information Agency	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
U.S. International Trade Commission	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	T	T	T	T	T	T	T	T	T	X	X	X	X	
U.S. Postal Service	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	T	T	T	T	T	T	X	X	X	X	X	X		

N = The agency did not exist as such; therefore, no data are available.

O = The agency existed but had no R&D to report.

T = The agency existed, but data were not collected at this level.

X = The agency existed, and data were collected and submitted by the agency.

Z = The agency existed but was unable to report.

DT&E = Developmental test and evaluation.

RDT&E = Research and development, testing, and evaluation.

Note(s):

This table summarizes which agencies have reported to the Survey of Federal Funds for Research and Development (Federal Funds Survey) and have been included in Federal Funds reports for volume 29 (FYs 1979–81) through volume 69 (FYs 2019–20). For volume 69, actual data were collected for FY 2019, and estimates were collected for FY 2020.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

TABLE A-2

Notes associated with agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–69

(Notes)

Department	Explanatory information
Department of Agriculture	
Agricultural Marketing Service	<p>Although the Agricultural Marketing Service (AMS) was established in April 1972, FY 1979 was the first year in which Congress appropriated funds to this agency.</p> <p>Data reported for AMS include funds for the Office of Transportation beginning in 1989.</p> <p>The Grain Inspection, Packers, and Stockyards Administration (GIPSA) was re-organized and absorbed in AMS in September 2017. Because GIPSA R&D projects were closed out, the transfer did not have much effect on the FY 2018 funding reported by AMS.</p>
Agricultural Research Service	The Human Nutrition Information Service merged with the Agricultural Research Service on 20 February 1994.
Agricultural Stabilization and Conservation Service	The Agricultural Stabilization and Conservation Service was abolished as of 20 October 1994.
Cooperative State Research, Education, and Extension Service	<p>The Cooperative State Research Service merged with the Extension Service on 19 October 1994 to become the Cooperative State Research, Education, and Extension Service (CSREES) due to reorganization of the Department of Agriculture.</p> <p>CSREES changed its name to the National Institute of Food and Agriculture in FY 2008.</p>
Economic Research Service	<p>Data reported for the Economics, Statistics, and Cooperative Service include programs of the Economic Research Service (ERS), the Statistical Reporting Service (SRS), and the Farmer Cooperative Service for FYs 1977–79.</p> <p>Data reported for the Economics and Statistics Service include programs of ERS and SRS for FY 1980.</p>
Economics and Statistics Service	Data reported for the Economics and Statistics Service include programs of the Economic Research Service and the Statistical Reporting Service for FY 1980.
Economics, Statistics, and Cooperative Service	Data reported for the Economics, Statistics, and Cooperative Service include programs of the Economic Research Service, the Statistical Reporting Service, and the Farmer Cooperative Service for FYs 1977–79.
Federal Grain Inspection Service	The Federal Grain Inspection Service was abolished on 20 October 1994, and the Grain Inspection, Packers, and Stockyards Administration assumed its functions.
Foreign Agricultural Service	The Office of International Cooperation and Development became part of the Foreign Agricultural Service (FAS) in June 1994. Data reported for FAS include funds appropriated to International Cooperation and Development programs within FAS as of FY 1994.
Grain Inspection, Packers, and Stockyards Administration	<p>The Federal Grain Inspection Service was abolished on 20 October 1994, and the Grain Inspection, Packers, and Stockyards Administration (GIPSA) assumed its functions.</p> <p>GIPSA was re-organized and absorbed in the Agricultural Marketing Service in September 2017; GIPSA funding for FY 2017 declined because GIPSA R&D projects were closed out. GIPSA was eliminated as a standalone agency as of 14 November 2017, so no funding was reported for FY 2018.</p>
Human Nutrition Information Service	The Human Nutrition Information Service merged with the Agricultural Research Service on 20 February 1994.
National Institute of Food and Agriculture	The National Institute of Food and Agriculture was created through the Food, Conservation, and Energy Act of 2008 and replaced the former Cooperative State Research, Education, and Extension Service (CSREES).
Office of International Cooperation and Development	The Office of International Cooperation and Development became part of the Foreign Agricultural Service (FAS) in June 1994. Data reported for FAS include funds appropriated to International Cooperation and Development programs within FAS as of FY 1994.
Office of Transportation	Data reported for the Agricultural Marketing Service include funds for the Office of Transportation beginning in 1989.
Rural Business-Cooperative Service	This agency's name changed from the Rural Business and Cooperative Development Service to the Rural Business-Cooperative Service on 30 January 1996.
Department of Commerce	
Maritime Administration	In 1981, the Maritime Administration moved from the Department of Commerce to the Department of Transportation.
National Fire Prevention and Control Administration	Functions for the National Fire Prevention and Control Administration transferred from the Department of Commerce to the Federal Emergency Management Agency as of 1 April 1979.

TABLE A-2

Notes associated with agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–69

(Notes)

Department	Explanatory information
Department of Defense	Since volume 40, the Department of Defense (DOD) has reported research obligations and development obligations separately. Tables reporting obligations for research, by state and performer, and obligations for development, by state and performer, were specifically created for DOD. Circumstances specific to DOD are (1) DOD funds the preponderance of federal development and (2) DOD development funded at institutions of higher education is typically performed at university-affiliated nonacademic laboratories, which are separate from universities' academic departments, where university research is typically performed.
	During the volume 44 survey cycle, the Director for Defense Research and Engineering (DDR&E) at DOD requested that the National Science Foundation (NSF) further clarify the true character of DOD's R&D program, particularly as it compares with other federal agencies, by adding more detail to development obligations reported by DOD respondents. Specifically, DOD requested that NSF allow DOD agencies to report development obligations in two separate categories: advanced technology development and major systems development.
	An excerpt from a letter written by Robert V. Tuohy, Chief, Program Analysis and Integration at DDR&E, to John E. Jankowski, Program Director, Research and Development Statistics Program, Division of Science Resources Statistics, NSF, explains the reasoning behind the DDR&E request:
	"The DOD's R&D program is divided into two major pieces, Science and Technology (S&T) and Major Systems Development. The other federal agencies' entire R&D programs are equivalent in nature to DOD's S&T program, with the exception of the Department of Energy and possibly the National Aeronautics and Space Administration. Comparing those other agency programs to DOD's program, including the development of weapons systems such as F-22 Fighter and the New Attack Submarine, is misleading."
	Not all DOD agencies with development obligations are able to categorize them according to the advanced technology and major systems development breakdown. Therefore, in the volume 46 (FYs 1996–98) survey cycle, total DOD development does not equal the sum of total DOD advanced technology development and total DOD major systems development.
	Beginning with volume 54 (FYs 2004–06), DOD now requires its reporting agencies to adhere to DOD control numbers when providing data to the Federal Funds Survey.
	Starting with volume 61 (FYs 2011–13), DOD subagencies other than the Defense Advanced Research Projects Agency were reported as an aggregate total under other defense agencies to enable complete reporting of DOD R&D (both unclassified and classified). Consequently, DOD began reporting additional classified R&D not previously reported by its subagencies.
	Starting with volume 62 (FYs 2012–14), an "undistributed" category was added to the geographic location tables for DOD obligations for which the location of performance is not reported. It includes DOD obligations for industry R&D that were included in individual state totals prior to FY 2012 and DOD obligations for other performers that were not reported prior to FY 2011. This change was applied retroactively to FY 2011 data.
	Beginning with FY 2016, the totals reported for development outlays represent a refinement to this category by more narrowly defining it to be "experimental development." Most notably, totals for development do not include the DOD Budget Activity 7 (Operational Systems Development) outlays. Those funds, previously included in DOD's development outlay totals, support the development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year. Therefore, the data are not directly comparable with totals reported in previous years.
	As of volume 66 (FYs 2016–17), the definition of major systems development was changed to represent DOD Budget Activities 4 through 6 instead of Budget Activities 4 through 7.
	Funding for DOD's Operational Systems Development (Budget Activity 7) was first reported as a separate category for volume 66 (FYs 2016–17).
Defense Agencies	
Chemical and Biological Defense	Before FY 2000, R&D of Chemical and Biological Defense was reported with the Washington Headquarters Services. Beginning with volume 61 (FYs 2011–13), agency totals are included in the category Other defense agencies.
Defense Advanced Research Projects Agency	This agency's name changed to the Advanced Research Projects Agency on 13 July 1993, and it was changed back to Defense Advanced Research Projects Agency in February 1996.
Defense Business Transformation Agency	The Defense Business Transformation Agency was established on 7 October 2005. Beginning with volume 61 (FYs 2011–13), agency totals are included in the category Other defense agencies.
Defense Contract Management Agency	Beginning with volume 61 (FYs 2011–13), agency totals are included in the category Other defense agencies.
Defense Information Systems Agency	Data reported for the Defense Information Systems Agency included data for the Defense Technical Information Center (DTIC) until FY 2006, when DTIC became a separate field activity. Beginning with volume 61 (FYs 2011–13), agency totals are included in the category Other defense agencies.

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Notes associated with agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–69

(Notes)

Department	Explanatory information
Defense Logistics Agency	Beginning with volume 61 (FYs 2011–13), agency totals are included in the category Other defense agencies.
Defense Security Cooperation Agency	Beginning with volume 61 (FYs 2011–13), agency totals are included in the category Other defense agencies.
Defense Special Weapons Agency	The Defense Nuclear Agency was renamed the Defense Special Weapons Agency (DSWA) in 1996 as a result of a new charter and an expanded mission. The Defense Threat Reduction Agency (DTRA) was established on 1 October 1998. DTRA was formed through a merger of elements of the Office of the Secretary of Defense staff, the Defense Technology Security Administration, DSWA, and the On-Site Inspection Agency.
Defense Technical Information Center	In FY 2006, the Defense Technical Information Center became a separate field activity; in prior years, these data were reported as part of the Defense Information Systems Agency. Beginning with volume 61 (FYs 2011–13), agency totals are included in the category Other defense agencies.
Defense Threat Reduction Agency	The Defense Threat Reduction Agency (DTRA) was established on 1 October 1998. DTRA was formed through a merger of elements of the Office of the Secretary of Defense staff, the Defense Technology Security Administration, the Defense Special Weapons Agency, and the On-Site Inspection Agency. Beginning with volume 61 (FYs 2011–13), agency totals are included in the category Other defense agencies.
Joint Staff	The name of this agency changed from Joint Chiefs of Staff to Joint Staff in FY 1986. Beginning with volume 61 (FYs 2011–13), agency totals are included in the category Other defense agencies.
Missile Defense Agency	Beginning with volume 61 (FYs 2011–13), agency totals are included in the category Other defense agencies.
National Imagery and Mapping Agency	The Defense Mapping Agency merged with the newly created National Imagery and Mapping Agency on 1 October 1996.
Office of the Secretary of Defense	In FY 2006, the Washington Headquarters Service was renamed the Office of the Secretary of Defense (OSD). Beginning with volume 61 (FYs 2011–13), excepting the Defense Advanced Research Projects Agency, OSD began reporting for the agencies that had been presented under Department of Defense (DOD) agencies and activities and Operational Test and Evaluation, Director. These are now reported under Other defense agencies.
Other defense agencies	Beginning in FY 2011, Other defense agencies displays aggregated data of DOD subagencies engaged in classified R&D projects.
Special Operations Command	Beginning with volume 61 (FYs 2011–13), agency totals are included in the category Other defense agencies.
Uniformed Services University of the Health Sciences	Data for the Uniformed Services University of the Health Sciences are included with the Washington Headquarters Services' submission as of volume 45 (FYs 1995–97).
Washington Headquarters Services	Data for the Uniformed Services University of the Health Sciences are included with the Washington Headquarters Services' (WHS's) submission as of volume 45 (FYs 1995–97). Public Law No. 103-160, Section 1703, made the Office of the Secretary of Defense (OSD) responsible for the Chemical and Biological Defense Program (CBDP). Section 1701 required the creation of CBDP research, development, test, and evaluation program elements be established in the President's Budget for FYs 1996–97. Data for these new program elements are included in the Federal Funds Survey as of volume 46 (FYs 1996–98). Since FY 2000, R&D of Chemical and Biological Defense has been reported separately from the WHS. WHS's basic research data were revised in volume 47 (FYs 1997–99) to reflect changes that were not incorporated in volume 46 (FYs 1996–98). In FY 2006, WHS was renamed OSD.
Defense Civil Preparedness Agency	Functions for the Defense Civil Preparedness Agency transferred from the Department of Defense to the Federal Emergency Management Agency on 20 July 1979.
Department of the Air Force	Beginning in FY 2000, the Department of the Air Force (AF) did not report Budget Activity 6.7 Operational Systems Development data because the agency misunderstood the reporting requirements. During the volume 57 data collection cycle, AF edited prior-year data for FYs 2000–07 to include Budget Activity 6.7 Operational Systems Development data. These data revisions were derived from FY 2007 distribution percentages that were then applied backward to revise data for FYs 2000–06. Beginning in FY 2011, the Air Force stopped reporting classified R&D projects by location and started reporting them as undistributed.
Department of the Army	

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(Notes)

Department	Explanatory information
Civil Functions	Department of the Army (DA), Civil Functions (Corps of Engineers), development activities are appropriated by the Energy and Water Development and Related Agencies Appropriations Act and therefore cannot be categorized according to the advanced technology and major systems development breakdown. For accounting purposes, the funds are shown in the advanced technology total for DA.
Operational Test and Evaluation, Director	On 7 June 1999, the Secretary of Defense approved the disestablishment of the Office of the Director, Test, Systems Engineering and Evaluation. As a result of the restructure, the Director, Operational Test and Evaluation, assumed management responsibility for the Central Test and Evaluation Investment Program and the Test and Evaluation Program, excluding the Joint Test and Evaluation Program.
Other defense agencies	Beginning with volume 61 (FYs 2011–13), Other defense agencies displays aggregated data of Department of Defense subagencies engaged in classified R&D projects. DOD does not report the location of performance for these projects; rather they report these obligations as undistributed.
Test and Evaluation, Deputy under Secretary of Defense	On 7 June 1999, the Secretary of Defense approved the disestablishment of the Office of the Director, Test, Systems Engineering and Evaluation. As a result of the restructure, the Director, Operational Test and Evaluation, assumed management responsibility for the Central Test and Evaluation Investment Program and the Test and Evaluation Program, excluding the Joint Test and Evaluation Program. Beginning with volume 61 (FYs 2011–13), agency totals are included in Other defense agencies.
Department of Education	Several programs that serve older adults and people with disabilities were transferred from other agencies to the Department of Health and Human Services' Administration for Community Living, including a number of programs from the Department of Education due to the 2014 Workforce Innovation and Opportunities Act.
Department of Energy	In January 1996, the Bureau of Mines was abolished, and some of its activities were transferred to the Bureau of Land Management, the U.S. Geological Survey, and the Department of Energy (DOE).
Advanced Research Projects Agency-Energy	In FY 2007, the president signed the America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science Act (America COMPETES), which authorized the creation of the Advanced Research Projects Agency-Energy. In FY 2009, Congress appropriated \$400 million to fund the agency's first projects.
Bonneville Power Administration	In FY 1982, the Bonneville Power Administration (BPA) became part of the Department of Energy. BPA ceased to be a respondent as of the volume 68 (FYs 2018–19) data collection cycle.
Energy Delivery and Energy Reliability	In March 2003, the Department of Energy (DOE) created the Office of Electric Transmission and Distribution and the Office of Energy Assurance. In 2005, both offices and elements of the DOE Office of Fossil Energy were merged into the new Office of Electricity Delivery and Energy Reliability.
Department of Health and Human Services	
Administration on Aging	In FY 1991, Human Development Services was replaced by the Administration for Children and Families (ACF) and by the Administration on Aging (AOA). Since FY 1992, data shown for ACF have been separate from obligations for AOA. In FY 2012, AOA was transferred to the Administration for Community Living.
Administration for Children and Families	Obligations reported for the Administration for Children and Families (ACF) may be incomplete for FY 1992 due to unavailability of data. In FY 1991, Human Development Services was replaced by ACF and by the Administration on Aging (AOA). Since FY 1992, data shown for ACF have been separate from obligations for AOA.
Administration for Community Living	The Administration for Community Living (ACL) began reporting in FY 2015, replacing the Administration on Aging, which was transferred to ACL when ACL was established on 18 April 2012. Several programs that serve older adults and people with disabilities were transferred from other agencies to ACL, including a number of programs from the Department of Education due to the 2014 Workforce Innovation and Opportunities Act. Prior to FY 2012, data reported for the ACL was for the Administration on Aging.
Agency for Healthcare Research and Quality	In FY 1991, the Agency for Health Care Policy and Research (AHCPR) became separate from the Office of the Assistant Secretary for Health. AHCPR was renamed the Agency for Healthcare Research and Quality as stated in the Healthcare Research and Quality Act of 1999, signed by the president on 6 December 1999.
Agency for Toxic Substances and Disease Registry	Prior to FY 2000, data reported for the Environmental Protection Agency include R&D data for the Agency for Toxic Substances and Disease Registry.
Alcohol, Drug Abuse, and Mental Health Administration	Due to reorganization within the Department of Health and Human Services, the Alcohol, Drug Abuse, and Mental Health Administration ceased to exist as of October 1992, and its R&D functions are reported with National Institutes of Health data beginning with FY 1992. However, research support for some fields (such as psychology) in FY 1992 seems to be underreported.

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Notes associated with agencies included in the Survey of Federal Funds for Research and Development: Volumes 29–69

(Notes)

Department	Explanatory information
Biomedical Advanced Research and Development Authority	The Biomedical Advanced Research and Development Authority began reporting for volume 69 (FYs 2019–20). It could not submit any geographical data for FY 2019, so its data were reported as undistributed on the state tables.
Centers for Medicare and Medicaid Services	The Health Care Financing Administration became the Centers for Medicare and Medicaid Services (CMS) as of 1 July 2001. Starting with volume 68 (FYs 2018–19), CMS funding was reported by the CMS Office of Financial Management at an agency-wide level instead of by the CMS Center for Medicare and Medicaid Innovation (CMMI) and its R&D group, the Office of Research, Development, and Information (ORDI), which used to report at a component level.
Health Care Financing Administration	The Health Care Financing Administration became the Centers for Medicare and Medicaid Services as of 1 July 2001.
Human Development Services	In FY 1991, Human Development Services was replaced by the Administration for Children and Families (ACF) and by the Administration on Aging (AOA). Since FY 1992, data shown for ACF have been separate from obligations for AOA.
National Institutes of Health	Due to reorganization within the Department of Health and Human Services, the Alcohol, Drug Abuse, and Mental Health Administration ceased to exist as of October 1992, and its R&D functions have been reported with National Institutes of Health (NIH) data since FY 1992. However, research support for some fields (such as psychology) in FY 1992 seems to be underreported. In FY 2000, NIH reclassified as research the activities that it had previously classified as development; NIH data for FY 2000 forward reflect this change. For more information on the classification changes at the National Aeronautics and Space Administration and NIH, refer to Classification Revisions Reduce Reported Federal Development Obligations (InfoBrief NSF 02-309), February 2002, available at https://www.nsf.gov/statistics/nsf02309/ . NIH revised its financial database; beginning with FY 2004, NIH records no longer contain information on the field of science and engineering. Data for FY 2004 and later years are not directly comparable with data for FY 2003 and earlier years.
Office of the Assistant Secretary for Health	In FY 1991, the Agency for Health Care Policy and Research became separate from the Office of the Assistant Secretary for Health (ASH). ASH merged with the Office of the Secretary of Health and Human Services (OS) as of FY 1996. The merger created a new role for the Assistant Secretary for Health who became head of the Office of Public Health and Science, a new division within OS.
Office of the Secretary of Health and Human Services	The Office of the Assistant Secretary for Health merged with the Office of the Secretary of Health and Human Services (OS) as of FY 1996. The merger created a new role for the Assistant Secretary for Health who became head of the Office of Public Health and Science, a new division within OS.
Office of Public Health and Science	The Office of the Assistant Secretary for Health merged with the Office of the Secretary of Health and Human Services (OS) as of FY 1996. The merger created a new role for the Assistant Secretary for Health who became head of the Office of Public Health and Science, a new division within OS.
Social Security Administration	Effective 31 March 1995, the Social Security Administration became an independent agency; it is no longer part of the Department of Health and Human Services.
Substance Abuse and Mental Health Services Administration	In FY 2003, the Substance Abuse and Mental Health Services Administration (SAMHSA) reclassified some of its funding categories as non-R&D that were considered R&D in prior years. Data for FYs 2003–06 from SAMHSA are estimates based on SAMHSA's obligations by program activity budget and previously reported funding for development.
Department of Homeland Security	On 25 November 2002, the president signed the Homeland Security Act of 2002, establishing the Department of Homeland Security (DHS). DHS includes the R&D activities previously reported by the Federal Emergency Management Agency, the Science and Technology Directorate, the Transportation Security Administration, the U.S. Coast Guard, and the U.S. Secret Service.
Countering Weapons of Mass Destruction Office	The Countering Weapons of Mass Destruction (CWMD) Office was established on 7 December 2017. CWMD consolidated primarily the Domestic Nuclear Detection Office (DNDO) and a majority of the Office of Health Affairs, as well as other DHS elements. Prior to FY 2018, data reported for the CWMD would have been under the DNDO.
Domestic Nuclear Detection Office	The Domestic Nuclear Detection Office (DNDO) began reporting for FY 2014. It was consolidated under the Countering Weapons of Mass Destruction (CWMD) Office in December 2017. All of its funding is reported under the CWMD.
Science and Technology Directorate	The Transportation Security Laboratory (TSL) initially existed under the Transportation Security Administration (TSA) of the Department of Homeland Security (DHS), but in the 2005 DHS reorganization, TSL was moved from TSA to the Science and Technology Directorate. During the volume 67 (FYs 2017–18) data collection, the Science and Technology Directorate revised its FY 2016 data.
Transportation Security Administration	The Transportation Security Administration, which did not report data between FY 2010 and FY 2017, resumed reporting for volume 68 (FYs 2018–19).
U.S. Secret Service	The U.S. Secret Service, which did not report data between FY 2009 and FY 2017, resumed reporting for volume 68 (FYs 2018–19).

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(Notes)

Department	Explanatory information
Department of the Interior	
Bonneville Power Administration	In FY 1982, the Bonneville Power Administration became part of the Department of Energy.
Bureau of Land Management	In January 1996, the Bureau of Mines was abolished, and some of its activities were transferred to the Bureau of Land Management (BLM), the U.S. Geological Survey, and the Department of Energy. BLM, which did not report data between FY 1999 and FY 2014, resumed reporting for volume 65 (FYs 2015–17).
Bureau of Mines	In January 1996, the Bureau of Mines was abolished, and some of its activities were transferred to the Bureau of Land Management, the U.S. Geological Survey, and the Department of Energy.
Bureau of Ocean Energy Management	The Bureau of Ocean Energy Management, Regulation and Enforcement was split into the Bureau of Ocean Energy Management and the Bureau of Safety and Environmental Enforcement in FY 2012.
Bureau of Ocean Energy Management, Regulation, and Enforcement	On 19 May 2010, the Minerals Management Service was renamed the Bureau of Ocean Energy Management, Regulation, and Enforcement (BOEMRE). BOEMRE was split into the Bureau of Ocean Energy Management and the Bureau of Safety and Environmental Enforcement in FY 2012.
Bureau of Safety and Environmental Enforcement	The Bureau of Ocean Energy Management, Regulation and Enforcement was split into the Bureau of Ocean Energy Management and the Bureau of Safety and Environmental Enforcement in FY 2012.
Minerals Management Service	On 19 May 2010, the Minerals Management Service was renamed the Bureau of Ocean Energy Management, Regulation, and Enforcement.
National Biological Service	The name of the National Biological Survey changed to the National Biological Service (NBS) on 5 January 1995. Since FY 1994, NBS has performed all biological research activities formerly funded by the U.S. Fish and Wildlife Service and the National Park Service. Funding for NBS comes from the U.S. Geological Survey's (USGS's) congressional appropriation. Since FY 1996 data for the NBS have been included with the USGS submission.
National Park Service	The name of the National Biological Survey changed to the National Biological Service (NBS) on 5 January 1995. Since FY 1994, NBS has performed all biological research activities formerly funded by the U.S. Fish and Wildlife Service and the National Park Service (NPS). Obligations for FYs 2003–08 are for the NPS natural resources program; data for the cultural resources program were not available.
Office of the Secretary of the Interior	The Department of the Interior's Office of the Secretary has not funded any R&D activities since FY 1995.
Office of Water Research and Technology	The Office of Water Research and Technology has been combined with the U.S. Geological Survey since 1985.
U.S. Fish and Wildlife Service	The name of the National Biological Survey changed to the National Biological Service (NBS) on 5 January 1995. Since FY 1994, the NBS has performed all biological research activities formerly funded by the U.S. Fish and Wildlife Service (FWS) and the National Park Service. FWS, which did not report data between FY 1999 and FY 2014, resumed reporting for volume 65 (FYs 2015–17).
U.S. Geological Survey	The Office of Water Research and Technology has been combined with the U.S. Geological Survey (USGS) since 1985. Funding for the National Biological Service (NBS) comes from the USGS congressional appropriation. Since FY 1996, data for NBS have been included with the USGS submission. In January 1996, the Bureau of Mines was abolished, and some of its activities were transferred to the Bureau of Land Management, the USGS, and the Department of Energy.
Department of Justice	
Drug Enforcement Administration	Large differences exist between the Drug Enforcement Administration's R&D funding amounts for FYs 1996 and 1997 due to changes in the agency's R&D programs.
Immigration and Naturalization Service	On 1 March 2003, service and benefit functions of Immigration and Naturalization Service were transferred to the Department of Homeland Security as the U.S. Citizenship and Immigration Services.
Department of Labor	
Labor-Management Relations and Cooperative Programs	In 1984, Labor-Management Relations and Cooperative Programs replaced the Labor-Management Services Administration.
Labor-Management Services Administration	In 1984, the Labor-Management Services Administration was replaced by the Labor-Management Relations and Cooperative Programs.

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(Notes)

Department	Explanatory information
Department of State	The Agency for International Development (USAID) transferred from the Department of State (DOS) to the International Development Cooperation Agency on 1 October 1979.
	Increases in outlays and obligations reported by DOS during the volume 44 (FYs 1994–96) survey cycle reflect reporting of moneys received through interagency agreements with USAID. DOS transfers these outlays and obligations to other R&D performers.
	Effective 1 April 1999, all functions and authorities of the U.S. Arms Control and Disarmament Agency were transferred to DOS.
	On 1 October 1999, the U.S. Information Agency was integrated into DOS.
	DOS data for FY 2014 were excluded due to their poor quality.
	As of volume 68 (FYs 2018–19), DOS added the Global Health Programs R&D funding.
Agency for International Development	The Agency for International Development (USAID) transferred from the Department of State (DOS) to the International Development Cooperation Agency on 1 October 1979.
	Increases in outlays and obligations reported by DOS during the volume 44 (FYs 1994–96) survey cycle reflect reporting of moneys received through interagency agreements with USAID. DOS transfers these outlays and obligations to other R&D performers.
Department of Transportation	The Department of Transportation (DOT) did not become operational until 1967. Prior to 1966, similar obligations appear under DOT's organizational predecessors: the Federal Aviation Agency, the U.S. Coast Guard (formerly part of the Department of the Treasury and transferred to the Department of Homeland Security in 2003), the Bureau of Public Roads, the Office of Transportation Research and Development, and other components of the Department of Commerce vested with transportation functions.
Federal Highway Administration	The Federal Motor Carrier Safety Administration, formerly a part of the Federal Highway Administration, was established within the Department of Transportation on 1 January 2000, as stated in the Motor Carrier Safety Improvement Act of 1999 (Public Law No. 106-159, 113 Stat. 1748 [9 December 1999]).
Federal Motor Carrier Safety Administration	The Federal Motor Carrier Safety Administration, formerly a part of the Federal Highway Administration, was established within the Department of Transportation on 1 January 2000, as stated in the Motor Carrier Safety Improvement Act of 1999 (Public Law No. 106-159, 113 Stat. 1748 [9 December 1999]).
Federal Transit Administration	The name of this agency changed from the Urban Mass Transit Administration to the Federal Transit Administration on 18 December 1991.
Maritime Administration	In 1981, the Maritime Administration moved from the Department of Commerce to the Department of Transportation.
Research and Innovative Technology Administration	In January 2014, all Research and Innovative Technology Administration programs were transferred into the Office of the Assistant Secretary for Research and Technology in the Office of the Secretary of Transportation.
U.S. Coast Guard	On 25 November 2002, the president signed the Homeland Security Act of 2002, establishing the Department of Homeland Security (DHS). DHS includes the R&D activities previously reported by the U.S. Coast Guard.
Department of the Treasury	
Internal Revenue Service	Due to the reorganization of the Internal Revenue Service (IRS) and subsequent unavailability of data, FY 1992 figures are taken from estimates made in the volume 41 (FYs 1991–93) submission.
	Large changes in obligations reported by IRS for volume 44 (FYs 1994–96) are due to shifts in research funding.
	The IRS performed a detailed evaluation and assessment of its programs and determined that none of its functions can be defined as an R&D activity as defined in Office of Management and Budget (OMB) Circular A-11. Despite not having any R&D obligations, the IRS still sponsors a Federally Funded Research and Development Center, the Center for Enterprise Modernization.
Office of Thrift Supervision	In 1989, the Federal Home Loan Bank Board was replaced by the Office of Thrift Supervision (OTS). In 1990, OTS became part of the Department of the Treasury.
	As of 21 July 2011, OTS merged with the Office of the Comptroller of the Currency; it ceased to exist on 19 October 2011.
U.S. Customs Service	Beginning in FY 2003, the U.S. Customs Service Research and Development program was transferred to other subagencies of the Department of Homeland Security.
U.S. Secret Service	On 25 November 2002, the president signed the Homeland Security Act of 2002, establishing the Department of Homeland Security (DHS). DHS includes the R&D activities previously reported by the U.S. Secret Service (USSS).
Department of Veterans Affairs	During volume 68 (FYs 2018–19), the Department of Veterans Affairs added funds for the Medical Services Support to the existing R&D funding to fully report the total cost of intramural R&D. Although the Medical Services Support do not directly fund specific R&D activities, they do cover the additional expense of hosting intramural research programs that were not previously reported.

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(Notes)

Department	Explanatory information
Other agencies	
Administrative Office of the U.S. Courts	The Administrative Office of the U.S. Courts began reporting as of volume 66 (FYs 2016–17).
Agency for International Development	<p>Increases in outlays and obligations reported by the Department of State (DOS) during the volume 44 (FYs 1994–96) survey cycle reflect reporting of moneys received through interagency agreements with the Agency for International Development (USAID). DOS transfers these outlays and obligations to other R&D performers.</p> <p>USAID's new integrated system for budget and accounting records used to report data for volume 48 (FYs 1998–2000) did not contain codes for determining either fields of science and engineering or performer data. The National Science Foundation estimated these data based on USAID's Budget Authority (FYs 2000–02) and USAID's Federal Funds Survey submission to volume 44 (FYs 1994–96).</p> <p>USAID transferred from DOS to the International Development Cooperation Agency on 1 October 1979.</p>
Broadcasting Board of Governors	<p>The Broadcasting Board of Governors (BBG) became an independent federal entity on 1 October 1999, as mandated by the Foreign Affairs Reform and Restructuring Act (Public Law 105-277), signed by the president on 21 October 1998.</p> <p>On 22 August 2018, as part of a modernization effort, the BBG changed its name to the U.S. Agency for Global Media.</p>
Consumer Product Safety Commission	The Consumer Product Safety Commission did not submit data from FY 2004 through FY 2011 but began reporting again for volume 62 (FYs 2012–14).
Environmental Protection Agency	<p>Before FY 2000, data reported for the Environmental Protection Agency (EPA) included R&D data for the Agency for Toxic Substances and Disease Registry.</p> <p>In FY 2010, EPA was unable to report R&D or R&D plant by performer or by location. Percentage distributions calculated from EPA's data submission for FY 2009 were used to estimate its FY 2010 R&D by performer and its location.</p>
Federal Emergency Management Agency	<p>The Federal Emergency Management Agency (FEMA) was activated 1 April 1979, by Executive Order 12127. FEMA merged many of the separate disaster-related responsibilities, including the National Fire Prevention and Control Administration, whose 1978 funds are reported under FEMA.</p> <p>Functions for the Defense Civil Preparedness Agency transferred from the Department of Defense to FEMA on 20 July 1979.</p> <p>Functions for the National Fire Prevention and Control Administration transferred from the Department of Commerce to FEMA on 1 April 1979.</p> <p>Functions were transferred to the Department of Homeland Security (DHS) by act of 25 Nov. 2002 (116 Stat. 2213) and absorbed into DHS effective 1 March 2003.</p>
General Services Administration	Since 1985, the National Archives and Records Administration has been separate from the General Services Administration.
International Development Cooperation Agency	The Agency for International Development transferred from the Department of State to the International Development Cooperation Agency on 1 October 1979.
National Aeronautics and Space Administration	<p>During the volume 45 (FYs 1995–97) survey cycle, the National Aeronautics and Space Administration (NASA) made a statistical adjustment to the 1994 and 1995 field of science and engineering values to diminish a computational error introduced by its software.</p> <p>In FY 2000, NASA reclassified the International Space Station (ISS) as a physical asset, reclassified ISS Research as equipment, and transferred funding for the program from R&D to R&D plant.</p> <p>FYs 2004–06. NASA implemented a full-cost budget approach, which includes all of the direct and indirect costs for procurement, personnel, travel, and other infrastructure-related expenses relative to a particular program and project. NASA's data for FY 2004 and later years may not be directly comparable with its data for FY 2003 and earlier years.</p> <p>In FY 2006, NASA reclassified funding for the following items as operational costs: Space Operations, the Hubble Space Telescope, the Stratospheric Observatory for Infrared Astronomy, and the James Webb Space Telescope. This funding was previously reported as R&D plant.</p> <p>Between FYs 2006 and 2007, NASA's R&D obligations decreased by \$1 billion. Of this amount, \$850 million was accounted for by obligations for operational projects that NASA excluded in FY 2007 but reported in FY 2006. The remainder was from an overall decrease in obligations between FYs 2006 and 2007.</p> <p>In FY 2010, NASA resumed reporting ISS obligations as R&D plant.</p> <p>In FY 2012, NASA began reporting ISS obligations as research rather than R&D plant.</p> <p>In FY 2013, NASA revamped its reporting process so that the data for FY 2012 forward are not directly comparable with totals reported in previous years.</p>

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(Notes)

Department	Explanatory information
	NASA estimated that the revised Office of Management and Budget definition for "experimental development" reduced its reported R&D total by about \$2.7 billion in FY 2017 and \$2.9 billion in FY 2018 from what would have been reported under the previous definition prior to volume 66 (FYs 2016–17).
National Archives and Records Administration	Since 1985, the National Archives and Records Administration has been separate from the General Services Administration.
National Science Foundation	The National Science Foundation made changes to its field of science and engineering coding system, producing changes to some of the FY 1996 field of science data (such as mechanical engineering). These changes are reflected in the historical data tables.
Patient-Centered Outcomes Research Trust Fund	The Patient-Centered Outcomes Research Trust Fund (PCORTF) was established by Congress through the Patient Protection and Affordable Care Act of 2010, signed by the president on 23 March 2010. PCORTF began reporting for volume 67 (FYs 2017–18), but it also submitted data for FYs 2011–16.
Office of Thrift Supervision	In 1989, the Federal Home Loan Bank Board was replaced by the Office of Thrift Supervision (OTS). In 1990, OTS became part of the Department of the Treasury.
Social Security Administration	Effective 31 March 1995, the Social Security Administration became an independent agency; it is no longer part of the Department of Health and Human Services.
Tennessee Valley Authority	During the volume 47 (FYs 1997–99) survey cycle, the Tennessee Valley Authority (TVA) made adjustments to its FY 1996 R&D values to correct reporting errors. TVA reported that in recent years, most of the funds TVA had reported had been those invested by TVA's Office of Power rather than congressionally appropriated funds. In addition, a substantial amount of congressionally appropriated funds earmarked for environmental compliance and site restoration was erroneously reported as R&D in past years. TVA determined that these funds did not meet the criteria for classification as R&D spending. Some trend shifts are related to these adjustments because TVA could only make revisions as far back as 1996. TVA, which did not report data between FY 1999 and FY 2016, resumed reporting for volume 67 (FYs 2017–18).
U.S. Agency for Global Media	On 22 August 2018, as part of a modernization effort, the Broadcasting Board of Governors changed its name to the U.S. Agency for Global Media (USAGM). USAGM did not submit data from FY 2008 through FY 2018 but began reporting again for volume 69 (FYs 2019–20).
U.S. Arms Control and Disarmament Agency	FY 1994 figures for the U.S. Arms Control and Disarmament Agency (ACDA) are based on the agency's volume 43 submission for FY 1993. Effective 1 April 1999, all functions and authorities of ACDA were transferred to the Department of State.
U.S. Information Agency	Data reported for the U.S. Information Agency (USIA) include funds for the former International Communication Agency for FYs 1977–81. On 1 October 1999, USIA was integrated into the Department of State.
U.S. International Trade Commission	In 2000, the U.S. International Trade Commission stopped classifying any of its activities as R&D.
U.S. Postal Service	The U.S. Postal Service, which did not report data between FY 1999 and FY 2016, resumed reporting for volume 67 (FYs 2017–18) and submitted data for FYs 2015–16.

Note(s):

These notes include explanatory information on federal agencies' reports for volume 29 (FYs 1979–81) through volume 69 (FYs 2019–20) of the Survey of Federal Funds for Research and Development (Federal Funds Survey). For volume 69, actual data were collected for FY 2019, and estimates were collected for FY 2020.

Source(s):

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.

Acknowledgments and Suggested Citation

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Contact Us

Report Author

Christopher Pece
Survey Manager
Research and Development Statistics Program, NCSES
Tel: (703) 292-7788
E-mail: cpece@nsf.gov

NCSES

National Center for Science and Engineering Statistics
Directorate for Social, Behavioral and Economic Sciences
National Science Foundation
2415 Eisenhower Avenue, Suite W14200
Alexandria, VA 22314
Tel: (703) 292-8780
FIRS: (800) 877-8339
TDD: (800) 281-8749
E-mail: ncsesweb@nsf.gov